

SLV
BULLETIN 34

REPORT OF THE 1912 INSPECTION OF
THE ATLANTIC CITY WOODEN
TEST FENCE,

INCLUDING THE REPAINTING TESTS
AND THE NEW TESTS.



SCIENTIFIC SECTION

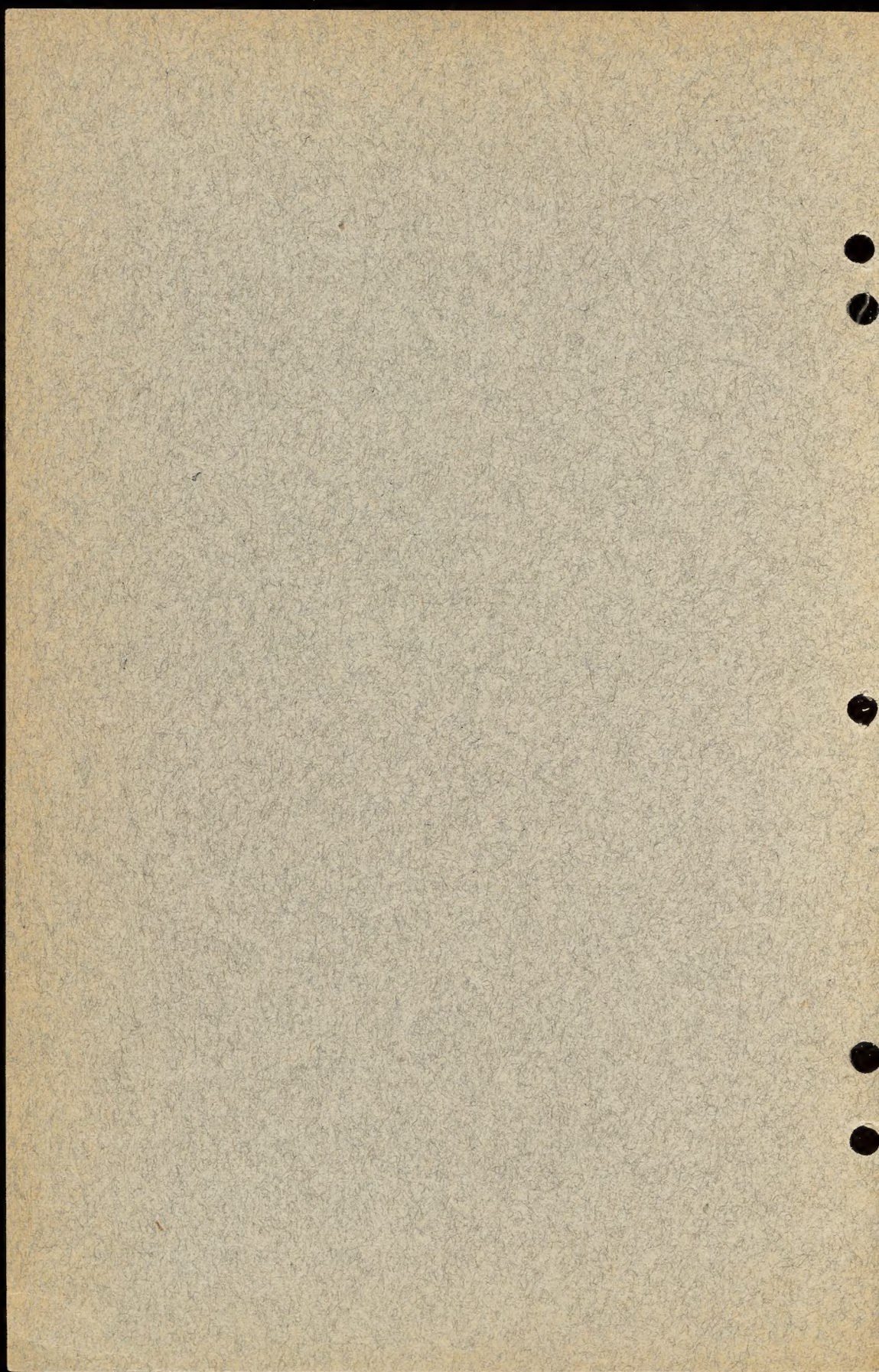
HENRY A. GARDNER, Director

EDUCATIONAL BUREAU

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REPORT OF THE 1912 INSPECTION OF THE ATLANTIC CITY WOODEN TEST FENCE, INCLUDING THE REPAINTING TESTS AND THE NEW TESTS.

An inspection of the Atlantic City Test Fence was made on August 30, 1912, by a committee* representing the Master Painters' Association and the Scientific Section of the Educational Bureau, Paint Manufacturers' Association of the United States. The first set of panels examined were those originally painted during December, 1907, and repainted in May, 1910, these repainting tests having weathered over two years previous to inspection.

Panels, Paints, and Preparation. It will be remembered that of the panels painted in 1907 with forty-seven different formulas of the single and combination pigment type, all of the yellow-pine and cypress panels, as well as all panels painted yellow and gray, were excluded from the repainting tests.† The panels which had been painted

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Charles Macnichol, Member Washington Association of Master Painters.

H. A. Gardner, Assistant Director, Institute of Industrial Research, Washington, D. C.

† Bulls. 16 and 26, Scien. Sec., Paint Mfrs. Asso. of U. S.

with paints containing lithopone had been removed from the fence soon after the first inspection in 1909.

After the second annual inspection, the white-pine panels painted white, which were adopted as standards for future tests, were grouped together at the southern end of the fence, with a western exposure. These were carefully prepared for repainting early in May, 1910, the surface of each being lightly sandpapered and brushed to remove loosely adhering dirt or sand and to a slight extent some of the soft chalked surface or hard checked surface that was in some cases presented.

Paints: The paints for the repainting test were all contained in original sealed and labeled packages, having been kept under lock and key in a storage vault for over three years, and being part of the supply that was used in the original painting in 1907.

An examination of the paints when the packages were opened disclosed the contents to be in good condition, with general absence of hardening except in the case of some of the packages containing single-pigment pastes (in wooden packages). Upon opening some of these a hard, thick skin covered the surface, and it was removed with difficulty. Much of the oil contained in these pastes had soaked through the wooden containers, leaving the pigment in a condition that required consider-

able effort to prepare it for reduction and application.

Reduction, Application, and Drying. For application of the first repainting coat of paint a reduction of one-half pint of turpentine and one-half pint of linseed oil to one gallon of paint was used, with an equivalent amount in the case of the white pastes, which were broken up previous to reduction, with $4\frac{1}{2}$ gallons of oil to 100 pounds of paste. In certain cases, where the surfaces of the old paints were very hard, a somewhat higher reduction was used, depending upon the judgment of the practical master painter to make such reduction as was needed. The penetration in every case was good, and the drying excellent. The second repainting coat was applied without reduction, six days after the first coat. This coat dried very well within twenty-four hours after application, although a rain storm caused slight pitting of the surface on most of the panels, but insufficient to be noticed except at close range. The repainting tests were started in very clear weather, and the temperature throughout the tests ranged from sixty to seventy-five. The paints were all applied to the panels exposed upon the fence.

Condition of Painted Surfaces at Inspection.

One of the most striking results shown at this year's inspection was the general superiority of

nearly all the repainted surfaces, as contrasted with the appearance of the original painting on the bare wood after one year's wear. This point may be confirmed by comparison of the attached inspection chart with the chart issued in Bulletin 16, in which the condition of the panels as originally painted was reported at the end of the year's wear. This conclusion, however, refers more especially to those paints which previous to the repainting possessed a fair repainting surface. Paints which had a rough and deeply checked surface previous to repainting presented at this year's inspection a mottled and alligatored surface. The crests of the old checks were very pronounced and of a dark color, while the intermediate valleys surrounding the crests were partly filled with a soft, white, dry pigment, indicating that the oil had been absorbed by contact with the bare wood, wherever deep checking was present, leaving the dry pigment exposed to the atmosphere. In the elevated spots surrounded by the checking the dark film was in excellent condition. Such a surface, however, with pigment unsatisfied with oil in some places and fully satisfied in other places, is no doubt subject to strains and stresses that will lead to serious defects. The committee therefore suggests that under such conditions, when a deeply checked surface is to be repainted, the surface should be thoroughly levelled, even at great expense, if the best results are to be obtained. The use of paints that

do not check deeply would, of course, be preferable in the first place.

In the repainting tests all of the white paints of the combination pigment type were in fair condition, those white paints carrying large percentages of lead and zinc, with or without a moderate percentage of the inert pigments, being somewhat superior to those white paints carrying heavy percentages of the inert pigments. The white paints made of zinc oxide and basic sulphate-white lead or zinc oxide and basic carbonate-white lead were giving exceptional service; much better, in fact, than at the first inspection. Although the repainted panels have been exposed to the elements for over two years, most of the paints are still giving good service.

Inspection of New Tests. The new tests which were exposed in 1909, and which were made entirely upon white-pine panels in three-color work, were also inspected on August 30, 1912, by the same committee.

One of the most apparent results of this series of tests was the superior condition of the tinted paints when contrasted with the same formulæ in white. The white paints, however, were the only ones inspected in detail. The mixed-pigment paints as a rule presented in colors a more permanent appearance than the single-pigment paints, the tinted leads having faded considerably. The

leads, however, in white looked in better condition than at last year's inspection, the rough, darkened surfaces having been changed through chalking to surfaces of lighter color.

NOTE.—An unfortunate accident, which happened early this spring, has prevented the committee from making a report upon panels N 22 to N 30, which were painted in 1909. The paving of the street from Chelsea to Longport, at Atlantic City, necessitated the establishment of a central road-binder mixing plant. The place selected for the plant was back of the east side of the test fence at Savannah Ave. Spur tracks were run in on the ground, and extended to a point very close to the fence. On two occasions loaded freight cars were accidentally backed through the fence, resulting in the entire destruction of panels N 22 to N 30. The fence has been trimmed up and the panels which were not destroyed by the accident were assembled at the southern end of the fence. The present arrangement of the panels is shown by photograph and by diagram.

A detailed report of the condition of each panel examined is shown in the following charts.

Attention is called to the detail photographs presented with this report, which show in a general way the condition of the test panels at the time of inspection. It is to be noted, however, that it is not always possible to illustrate by photographic means the true color values or surface conditions presented by the various paints. On this account the reader is advised not to give too much consideration to the illustrations, but to weigh carefully the appended report of conditions at inspection when forming a conclusion as to the value of the various formulas.

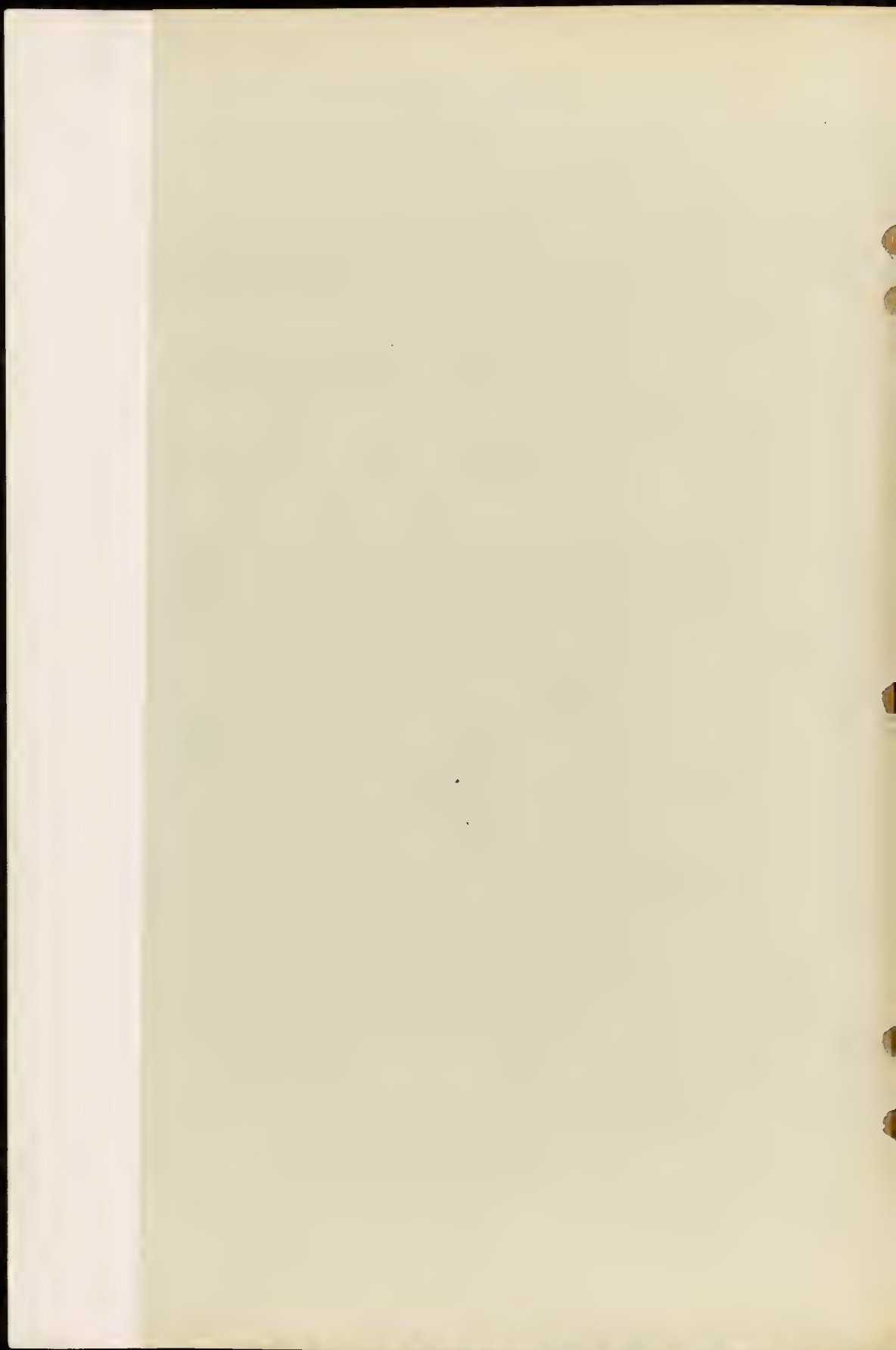
ATLANTIC CITY TEST FENCE.
PAINTED DECEMBER, 1907. EXPOSED JANUARY, 1908. REPAINTED MAY, 1910.

OLD TESTS.

TABLE OF RESULTS OF INSPECTION AUGUST, 1912.
WHITE-PINE PANELS PAINTED WHITE.

FORMULAS.												REPORT OF INSPECTION.			Panel No.	Formula No.
Formula No.	Panel No.	Basic Carbonate White Lead.	Zinc Oxide.	Basic Sulphate White Lead.	Zinc Lead.	Inert Pigments.						Chalking.	Checking.	General Condition.		
						Calcium Carbonate.	Calcium Sulphate.	Magnesium Silicate.	Barium Sulphate.	Silica.	Blanc Fixe.					
1	1	30.00%	70.00%									Very slight.....	Slight.....	Very good.....	1	1
2	3	50.00%	50.00%									Very slight.....	Slight.....	Very good.....	3	2
3	5	20.00%	50.00%	20.00%		10.00%						Medium.....	Very slight.....	Very good.....	5	3
4	7	48.50%	48.50%			3.00%						Medium.....	None.....	Very good.....	7	4
5	9	22.00%	50.00%			2.00%		26.00%				Slight.....	Slight.....	Good.....	9	5
6	11		64.00%						36.00%			Medium.....	Slight.....	Fairly good.....	11	6
7	13	37.00%	63.00%									Slight.....	Slight.....	Good.....	13	7
8	15	38.00%	48.00%							14.00%		Slight.....	Slight.....	Good.....	15	8
9	17		73.00%			2.00%				25.00%		Medium.....	Heavy.....	Fair.....	17	9
10	19	44.00%	46.00%			5.00%		5.00%				Slight.....	Slight.....	Good.....	19	10
11	21	50.00%	50.00%									Slight.....	Slight.....	Good.....	21	11
12	23	60.00%	34.00%									Slight.....	Very slight.....	Good.....	23	12
13	25		27.00%	60.00%		3.00%	6% Inert Pigment	10.00%				Medium.....	Very slight.....	Very good.....	25	13
14	27	25.00%	25.00%	20.00%		5.00%	25.00%					Medium.....	Slight.....	Fair.....	27	14
15	29	20.00%	40.00%		30.00%	10.00%						Slight.....	Medium.....	Fair.....	29	15
16	31	33.00%	33.00%						34.00%			Medium.....	Considerable.....	Fairly good.....	31	16
17	33	40.00%	40.00%					3.00%	13.00%		4.00%	Considerable.....	Medium.....	Fairly good.....	33	17
18	145	75.00%	25.00%									Considerable.....	Slight.....	Good.....	145	18
19	147		25.00%	75.00%								Considerable.....	Very slight.....	Very good.....	147	19
20	149	67.00%	19.50%			10.00%		3.50%				Considerable.....	Considerable.....	Fair.....	149	20
33	176	15.00%	30.00%	25.00%						30.00%		Medium.....	Slight.....	Good.....	176	33
34	175	38.95%	33.58%	4.81%		19.48%			1.59%	1.59%		Slight.....	Slight.....	Good.....	175	34
35	180	37.51%	25.87%	7.84%		20.38%			4.21%	4.21%		Slight.....	Slight.....	Good.....	180	35
36	181	100.00%										Heavy.....	Deep.....	Fair.....	181	36
37	182	100.00%										Heavy.....	Heavy and deep.....	Fair.....	182	37
38	177	100.00%										Heavy.....	Deep.....	Fair.....	177	38
39	178				100.00%							Considerable.....	Very slight.....	Good.....	178	39
40	168			100.00%								Heavy.....	None.....	Fairly good.....	168	40
45	170		90.00%			10.00%						Medium.....	Slight.....	Good.....	170	45
46	169		61.00%						39.00%			Slight.....	Slight.....	Good.....	169	46
47	172		100.00%									Slight.....	Surface cracking.....	Fair.....	172	47

Pure Linseed Oil used in all Paints.



ATLANTIC CITY TEST FENCE.
NEW TESTS—EXPOSED JUNE, 1909.

TABLE OF RESULTS OF INSPECTION AUGUST, 1912.
WHITE-PINE PANELS PAINTED WHITE—THREE-COAT WORK.
Inspection only on White Paints.

Formula No.	Panel No.	FORMULAS.												REPORT OF INSPECTION.			Panel No.	Formula No.
		Basic Carbonate White Lead.	Zinc Oxide.	Basic Sulphate White Lead.	Precip. White Lead.	Zinc Lead.	Lithopone.	Inert Pigments.						Chalking.	Checking.	General Condition.		
								Calcium Carbonate.	Silica	Asbestine.	China Clay.	Barytes.	Blanc Fixe.					
1	1			45			%	%	%	%	%	%	%			Disintegrated..	1	1
2	2			45			40	15	15							Disintegrated..	2	2
3	3		45				45	10						Considerable..	Disintegrated..	Poor.....	3	3
4	4			45			45	10						Considerable..	Disintegrated..	Poor.....	4	4
5	5		40				40	20						Considerable..	Disintegrated..	Poor.....	5	5
6	6			45			35			20						Disintegrated..	6	6
7	7	50				36				2	8	4		Considerable..	Very slight..	Good.....	7	7
8	8			50			36			2	8	4				Disintegrated..	8	8
9	9			50			36			2		12				Disintegrated..	9	9
10	10		36	50						2	8	4		Slight.....	Slight.....	Poor.....	10	10
11	11	28	55							3		7	7	Slight.....	Considerable..	Fair to poor..	11	11
12	12		55	28						3				Considerable..	Slight.....	Good.....	12	12
13	13		60				30	10						Medium.....	Considerable..	Fair to poor..	13	13
14	14		30	30			30	10						Heavy.....	Considerable..	Fair to poor..	14	14
15	15			60			30			10				Heavy.....	Heavy.....	Fair.....	15	15
16	16						100									Disintegrated..	16	16
17	17						100									Disintegrated..	17	17
18	18	33	33						17		17			Slight.....	Slight.....	Fair.....	18	18
19	19	34	33						33					Slight.....	Disintegrated..	Poor.....	19	19
20	20	34	33								33			Slight.....	Slight.....	Fair to poor..	20	20
21	21	100												Heavy.....	Slight.....	Fairly good..	21	21
22	22					100											22	22
23	23	100															23	23
24	24			100													24	24
25	25					100											25	25
26	26																26	26
27	27	100															27	27
28	28	100															28	28
29	29	24	45	13						18							29	29
30	30	45					40	15									30	30
31	31	45					40		15					Heavy.....	Heavy alligatoring..	Very poor.....	31	31
32	32	45					35			20				Heavy.....	Heavy.....	Poor.....	32	32
33	33	50					36			2		12		Considerable..	Slight.....	Poor.....	33	33
34	34	75		25										Heavy.....	Considerable..	Fair.....	34	34
35	35	50		50										Considerable..	Slight.....	Fair.....	35	35
36	36								100							Disintegrated..	36	36

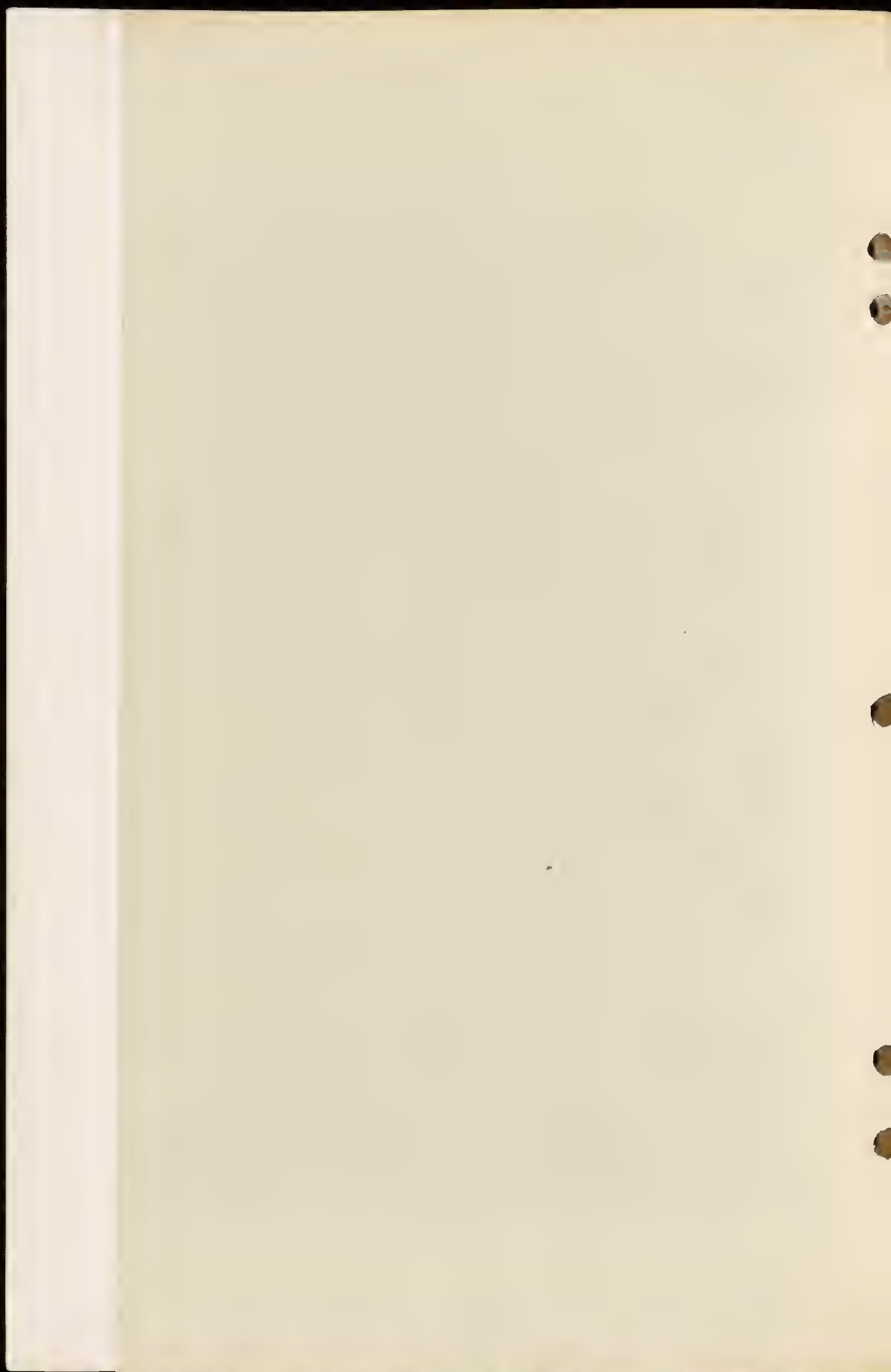
These tests are all marked with the capital letter N.

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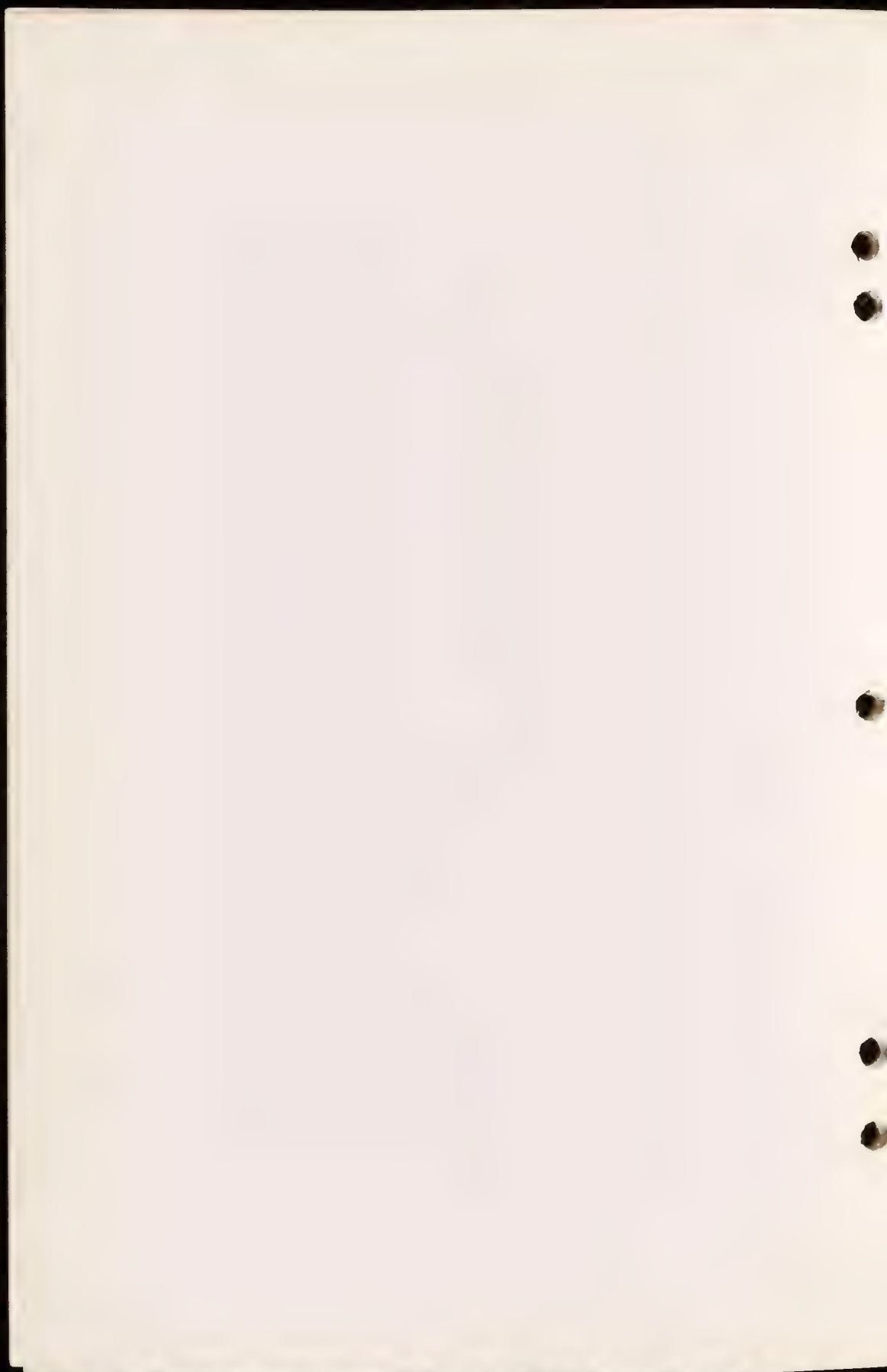
N.B.—Notice is called to the fact that White Lithopone Paints, when exposed to the weather, have not given satisfactory service upon wooden surfaces. For interior use, however, Lithopone Paints have proved highly satisfactory and very durable. Experiments with White Lithopone Paints, made up with special oils and vehicles designed to withstand exterior exposure, are under way.

Pure Linseed Oil used in all Paints.

TESTS 22-30 DESTROYED BY RAILROAD ACCIDENT. SEE TEXT.









VIEW OF TEST FENCE, AUGUST 30, 1912.

Present arrangement of panels shown. End of fence is shown cut off where destroyed by railroad. Road binder plant shown in back of fence.

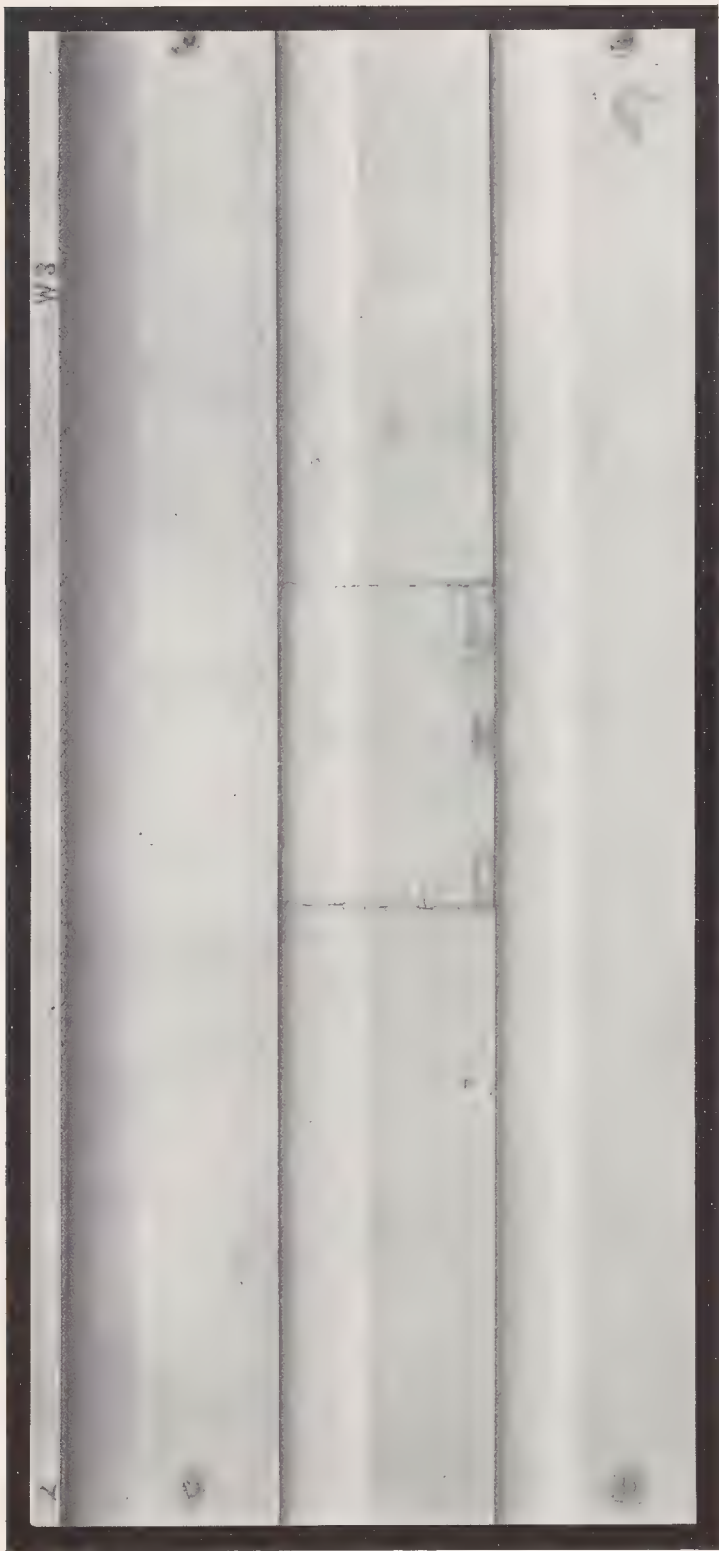


OLD TESTS REPAINTED

Formula No. 1

Test Panel No. 1

Basic Carbonate-White Lead.....	30%	<hr/>	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	70%		
	100%		Chalking: Very slight
			Checking: Slight
			General Condition: Very good

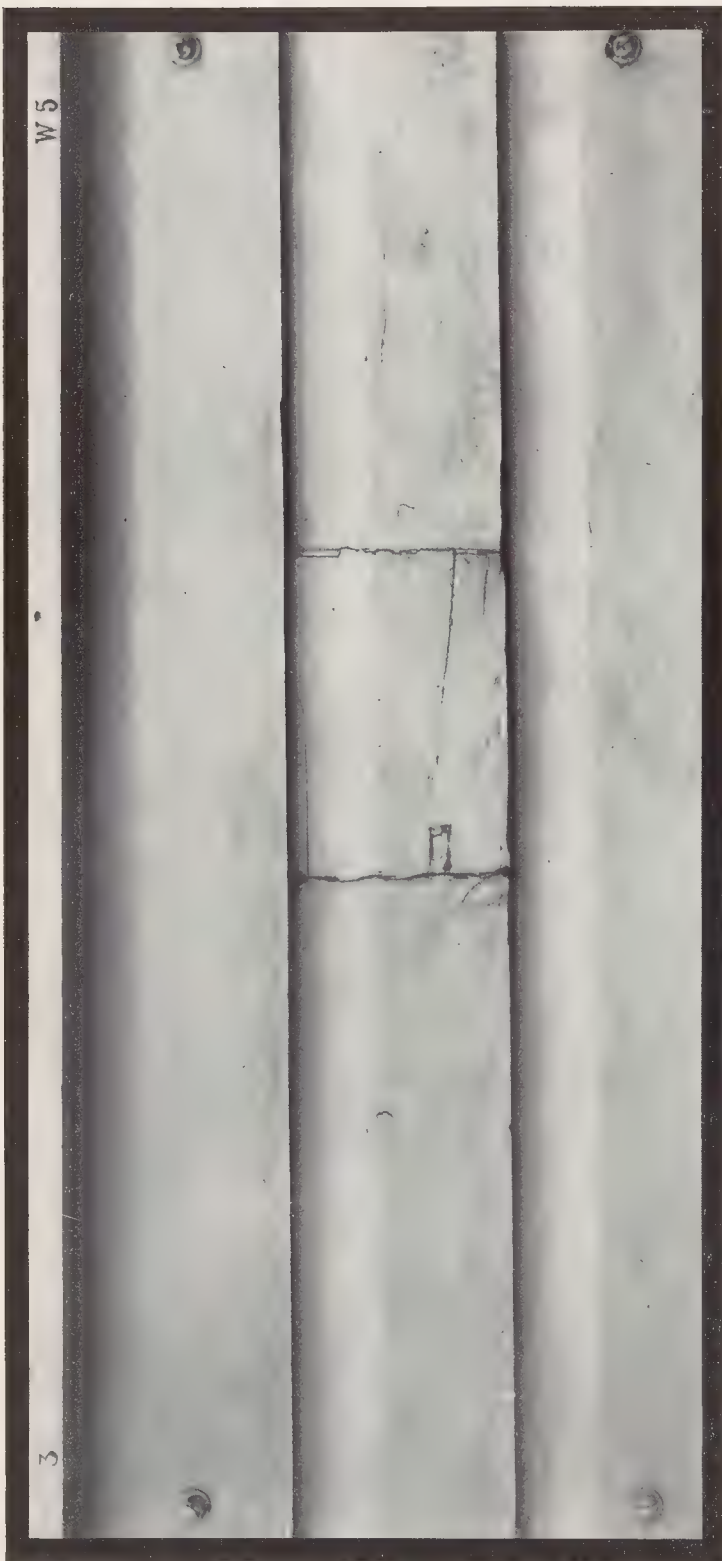


OLD TESTS REPAINTED

Formula No. 2

Test Panel No. 3

Basic Carbonate-White Lead.....	50%	<hr/>	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	50%		
	100%		Chalking: Very slight
			Checking: Slight
			General Condition: Very good

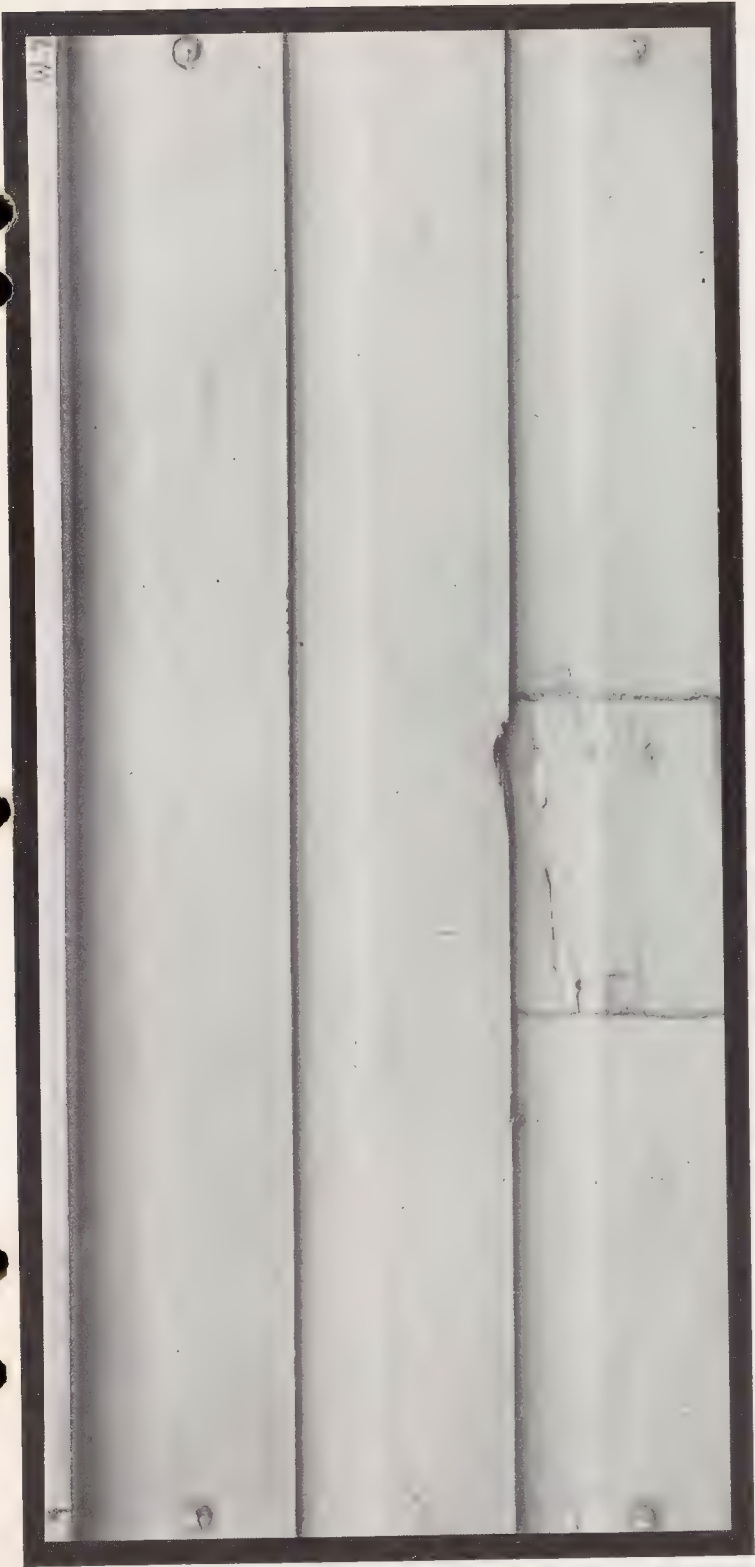


OLD TESTS REPAINTED

Formula No. 3

Test Panel No. 5

Basic Carbonate-White Lead.....	20%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	50%	Chalking: Medium
Basic Sulphate-White Lead.....	20%	Checking: Very slight
Calcium Carbonate.....	10%	General Condition: Very good
	100%	

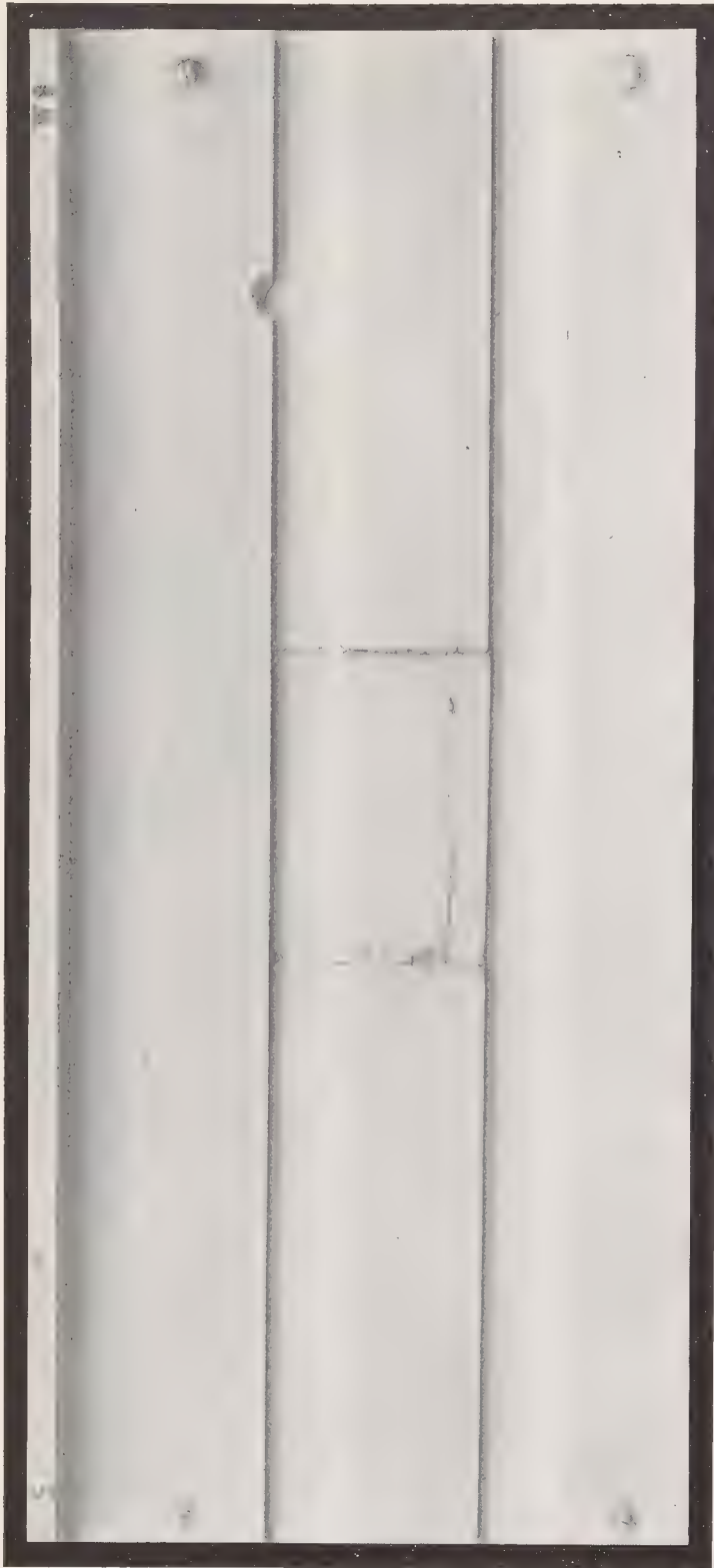


OLD TESTS REPAINTED

Formula No. 4

Test Panel No. 7

Basic Carbonate-White Lead.....	48.50%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	48.50%	Chalking: Medium
Calcium Carbonate.....	3.00%	Checking: None
	<u>100.00%</u>	General Condition: Very good

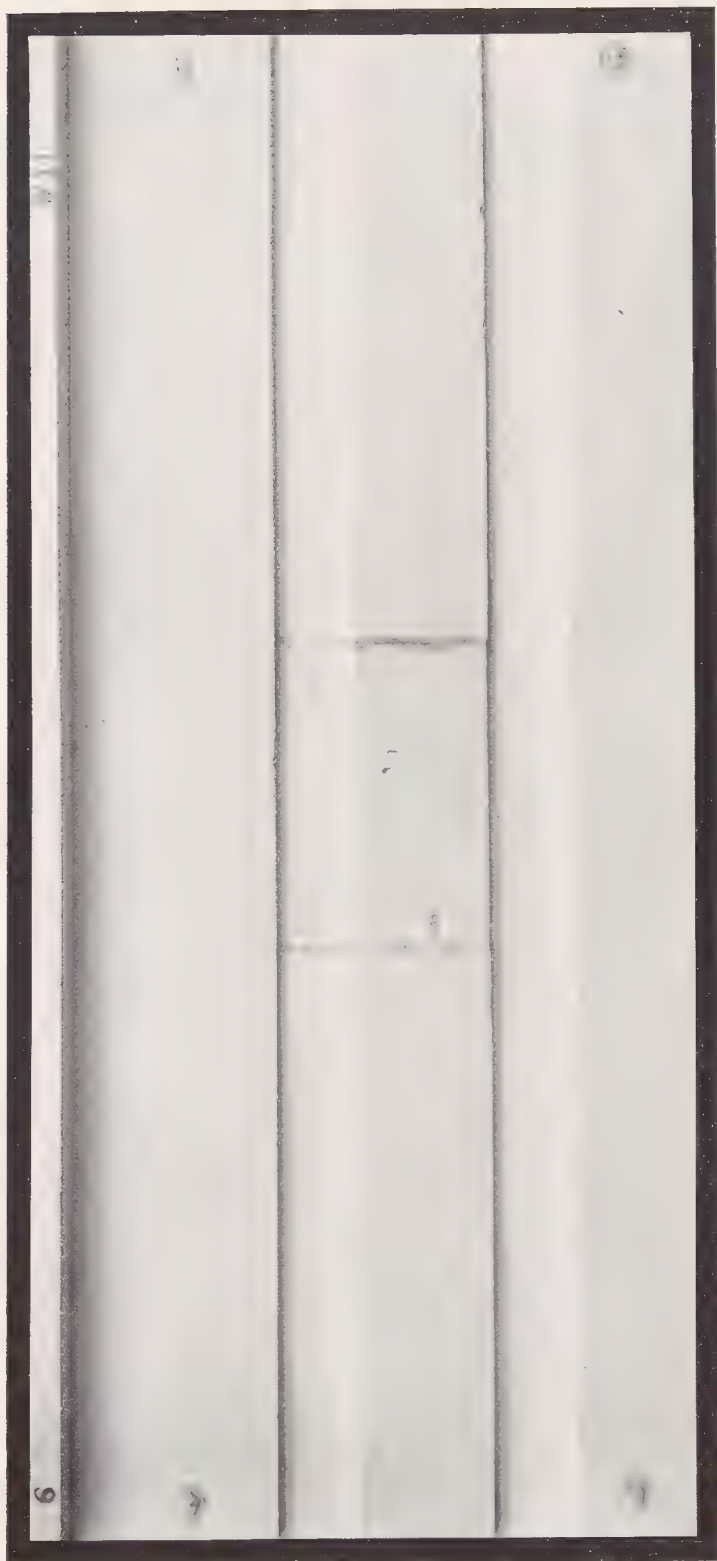


OLD TESTS REPAINTED

Formula No. 5

Test Panel No. 9

Basic Carbonate-White Lead.....	22%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	50%	Chalking: Slight
Calcium Carbonate.....	2%	Checking: Slight
Magnesium Silicate.....	26%	General Condition: Good
	100%	



OLD TESTS REPAINTED

Formula No. 6

Test Panel No. 11

Zinc Oxide.....	64%	Results of Inspection, Aug. 30, 1912:
Barium Sulphate.....	36%	Chalking: Medium
	<u>100%</u>	Checking: Slight
		General Condition: Fairly good



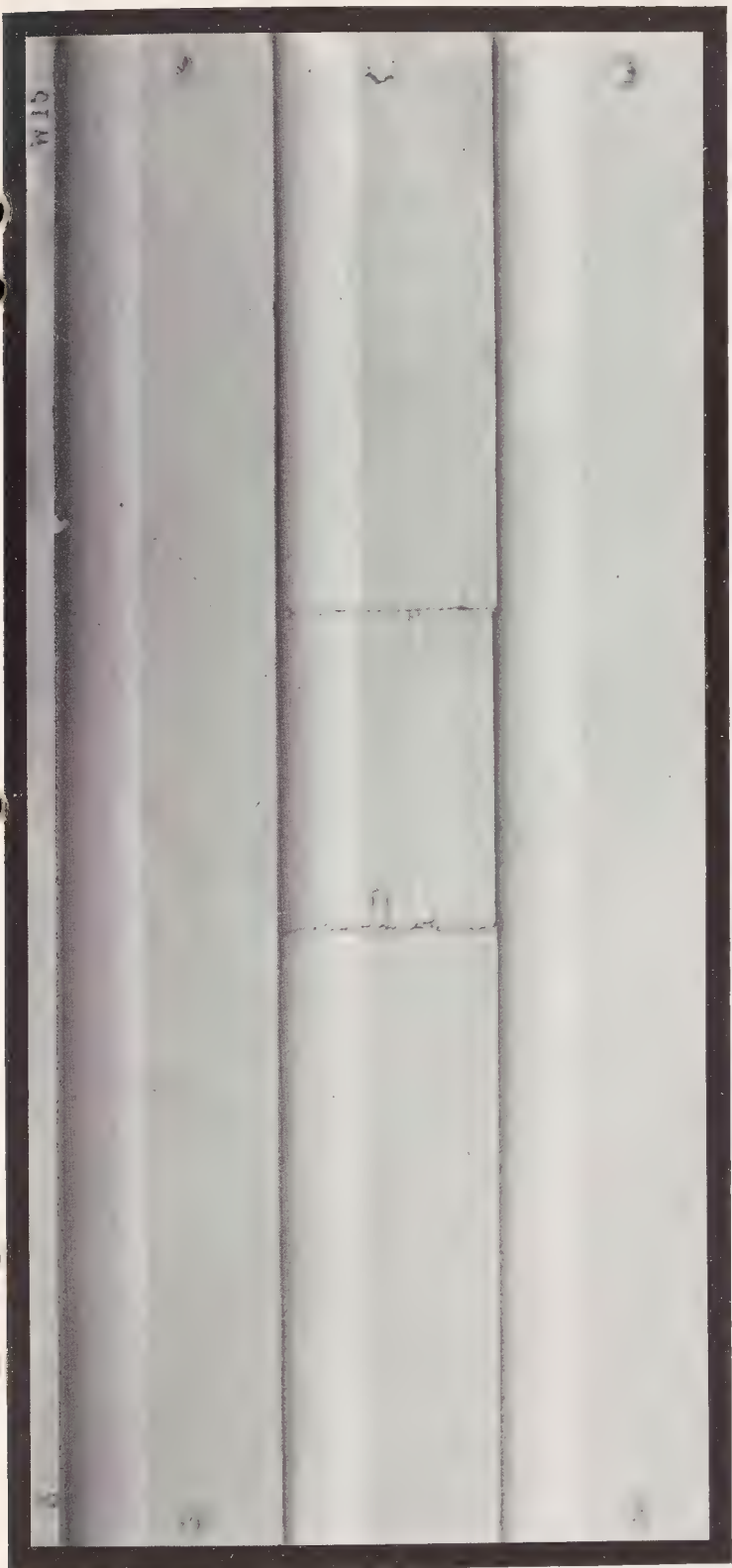
OLD TESTS REPAINTED

Formula No. 7

Test Panel No. 13

Basic Carbonate-White Lead.....	37%	
Zinc Oxide.....	63%	
	<hr/>	
	100%	

Results of Inspection, Aug. 30, 1912:
Chalking: Slight
Checking: Slight
General Condition: Good

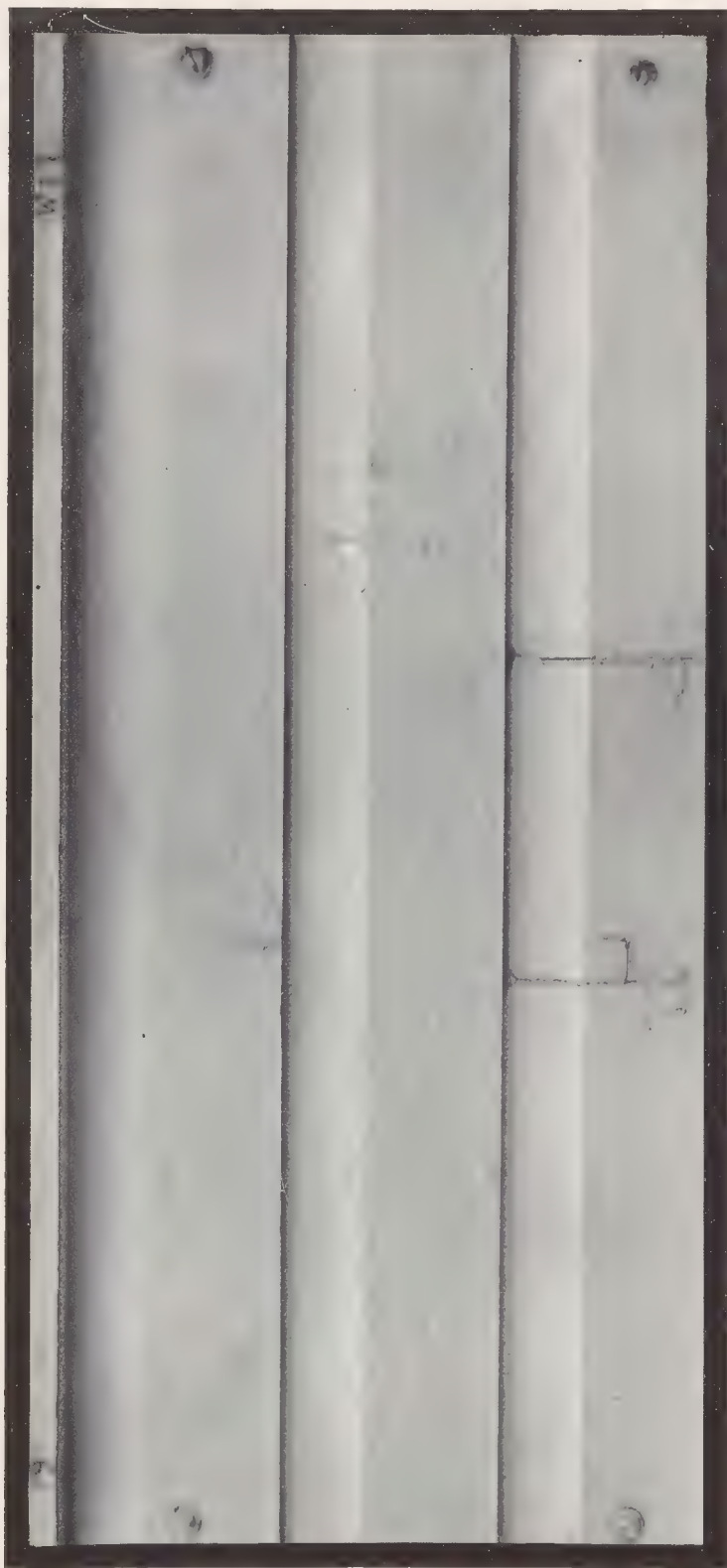


OLD TESTS REPAINTED

Formula No. 8

Test Panel No. 15

Basic Carbonate-White Lead.....	38%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	48%	Chalking: Slight
Silica	14%	Checking: Slight
	<hr/>	General Condition: Good
	100%	



OLD TESTS REPAINTED

Formula No. 9

Test Panel No. 17

Zinc Oxide.....	73%	Results of Inspection, Aug. 30, 1912:
Calcium Carbonate.....	2%	Chalking: Medium
Silica	25%	Checking: Heavy
	<hr/>	General Condition: Fair
	100%	



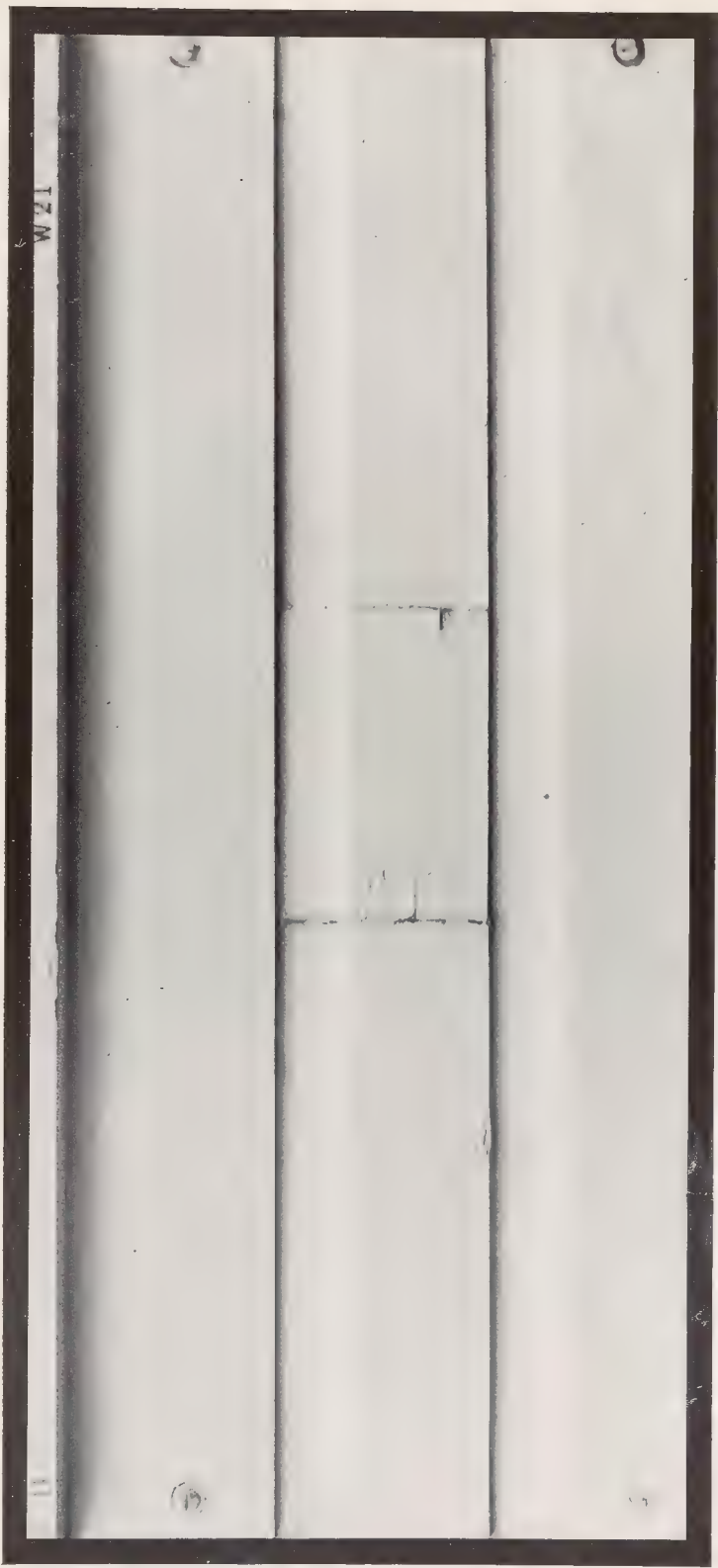
OLD TESTS REPAINTED

Formula No. 10

Test Panel No. 19

Basic Carbonate-White Lead.....	44%
Zinc Oxide.....	46%
Calcium Carbonate.....	5%
Magnesium Silicate.....	5%
<hr/>	
	100%

Results of Inspection. Aug. 30, 1912:
Chalking: Slight
Checking: Slight
General Condition: Good

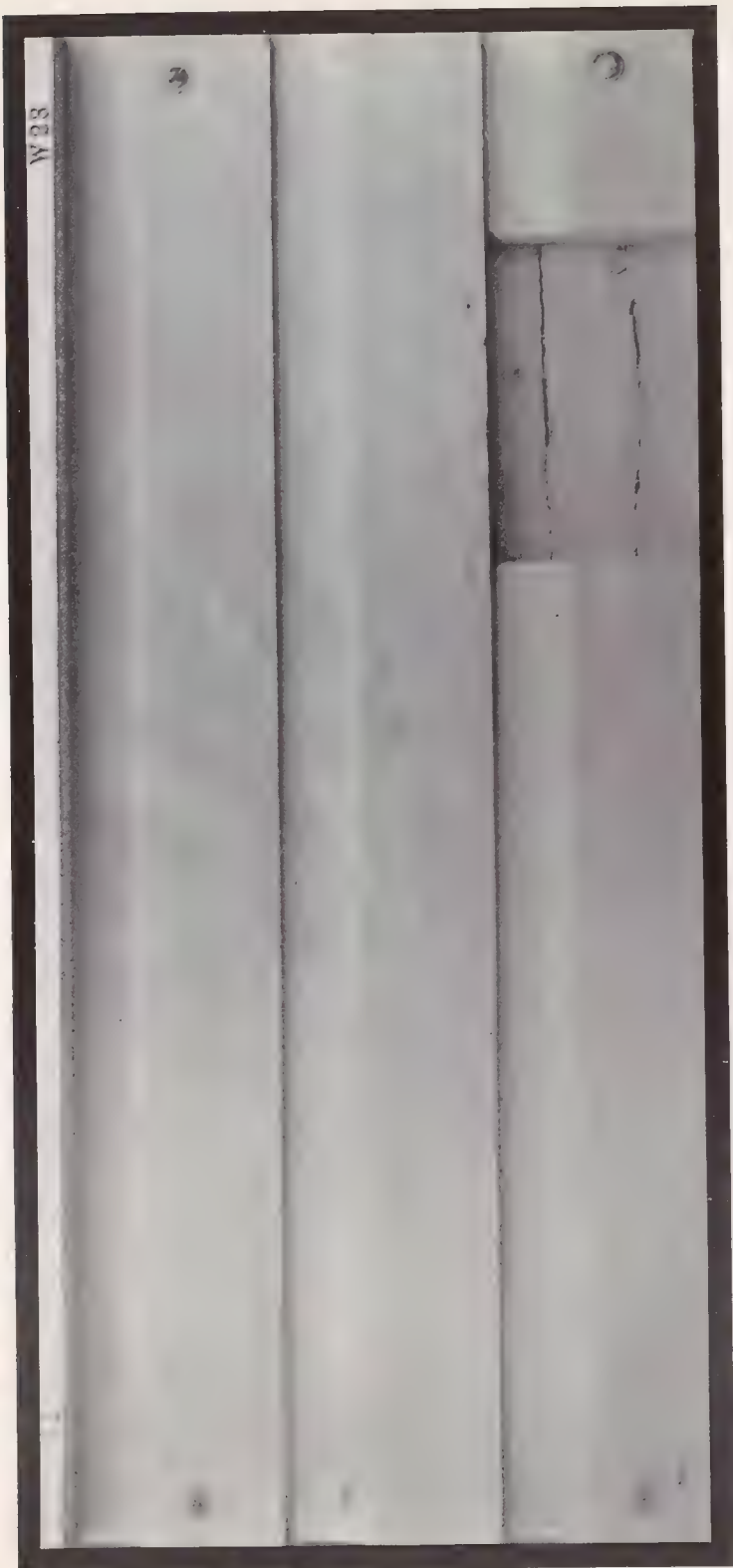


OLD TESTS REPAINTED

Formula No. 11

Test Panel No. 21

Basic Carbonate-White Lead.....	50%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	50%	Chalking: Slight
	<hr/>	Checking: Slight
	100%	General Condition: Good

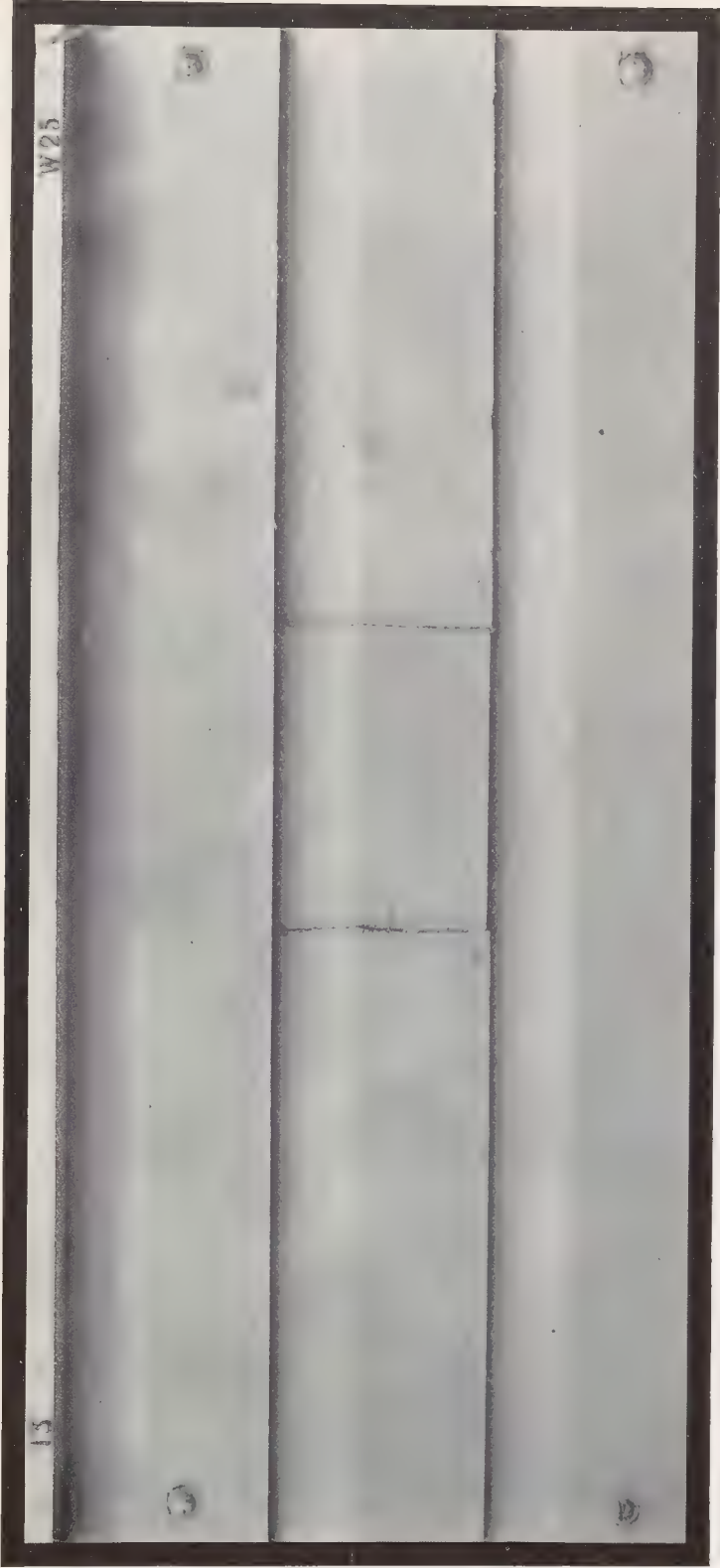


OLD TESTS REPAINTED

Formula No. 12

Test Panel No. 23

Basic Carbonate White Lead.....	60%	Results of Inspection. Aug. 30, 1912:
Zinc Oxide.....	34%	Chalking: Slight
Inert Pigment.....	6%	Checking: Very slight
	100%	General Condition: Good



OLD TESTS REPAINTED

Formula No. 13

Test Panel No. 25

Zinc Oxide.....	27%	Results of Inspection, Aug. 30, 1912:
Basic Sulphate-White Lead.....	60%	Chalking: Medium
Calcium Carbonate.....	3%	Checking: Very slight
Magnesium Silicate.....	10%	General Condition: Very good
	<hr/>	
	100%	

14

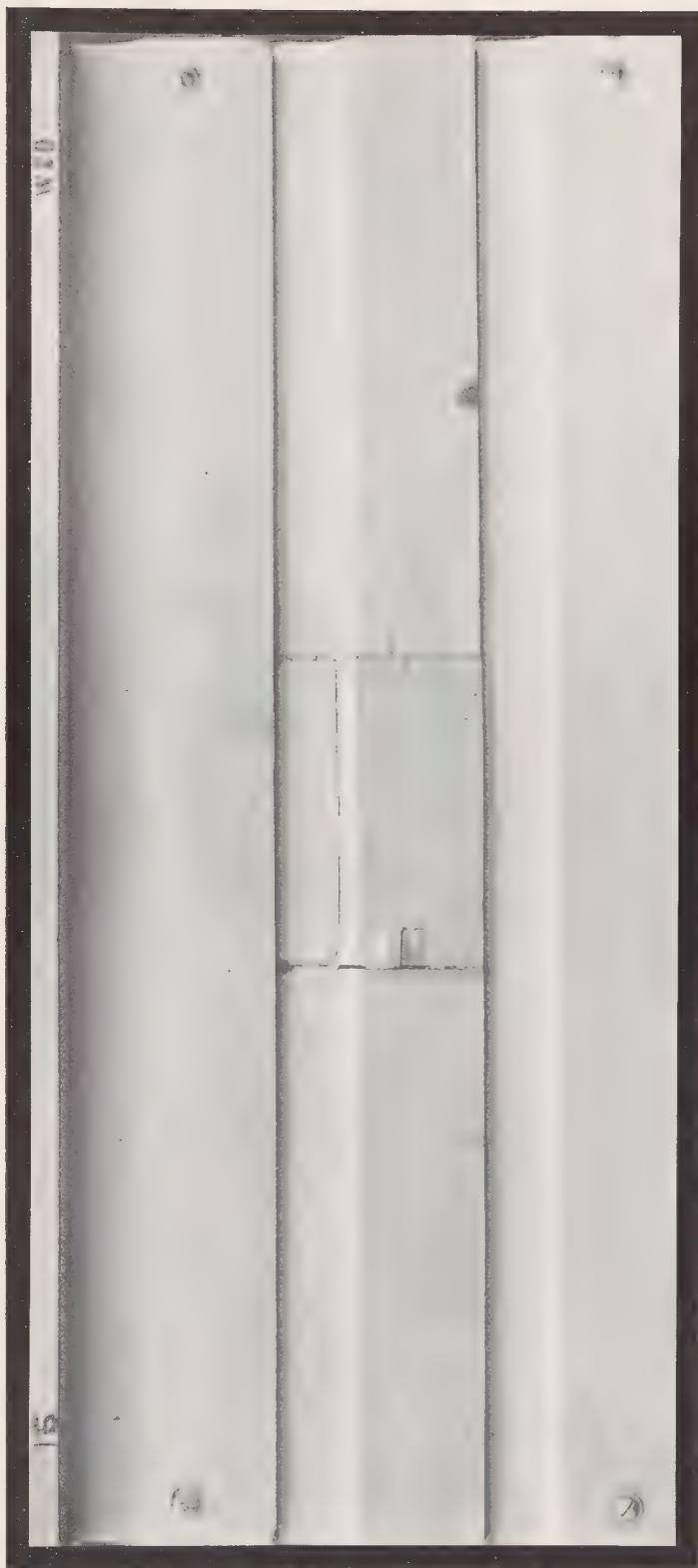
W 27

OLD TESTS REPAINTED

Formula No. 14

Test Panel No. 27

Basic Carbonate-White Lead.....	25%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	25%	Chalking: Medium
Basic Sulphate-White Lead.....	20%	Checking: Slight
Calcium Carbonate.....	5%	General Condition: Fair
Calcium Sulphate.....	25%	
		<hr/>
		100%

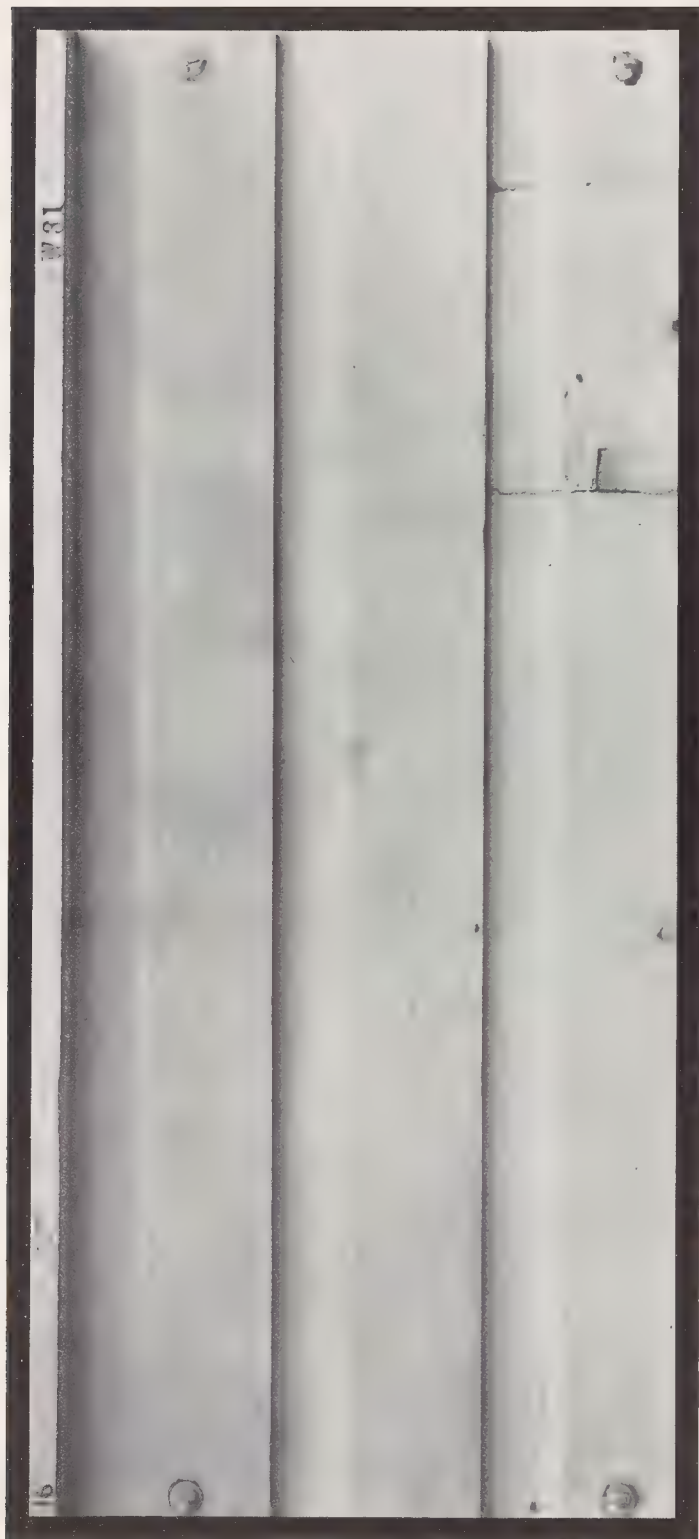


OLD TESTS REPAINTED

Formula No. 15

Test Panel No. 29

	Results of Inspection, Aug. 30, 1912:
Basic Carbonate-White Lead.....	20%
Zinc Oxide.....	40%
Zinc Lead.....	30%
Calcium Carbonate.....	10%
	<hr/> 100%
	Chalking: Slight
	Checking: Medium
	General Condition: Fair



OLD TESTS REPAINTED

Formula No. 16

Test Panel No. 31

Basic Carbonate-White Lead.....	33%
Zinc Oxide.....	33%
Barium Sulphate.....	34%
	<hr/>
	100%

Results of Inspection, Aug. 30, 1912:

Chalking: Medium

Checking: Considerable

General Condition: Fairly good



OLD TESTS REPAINTED

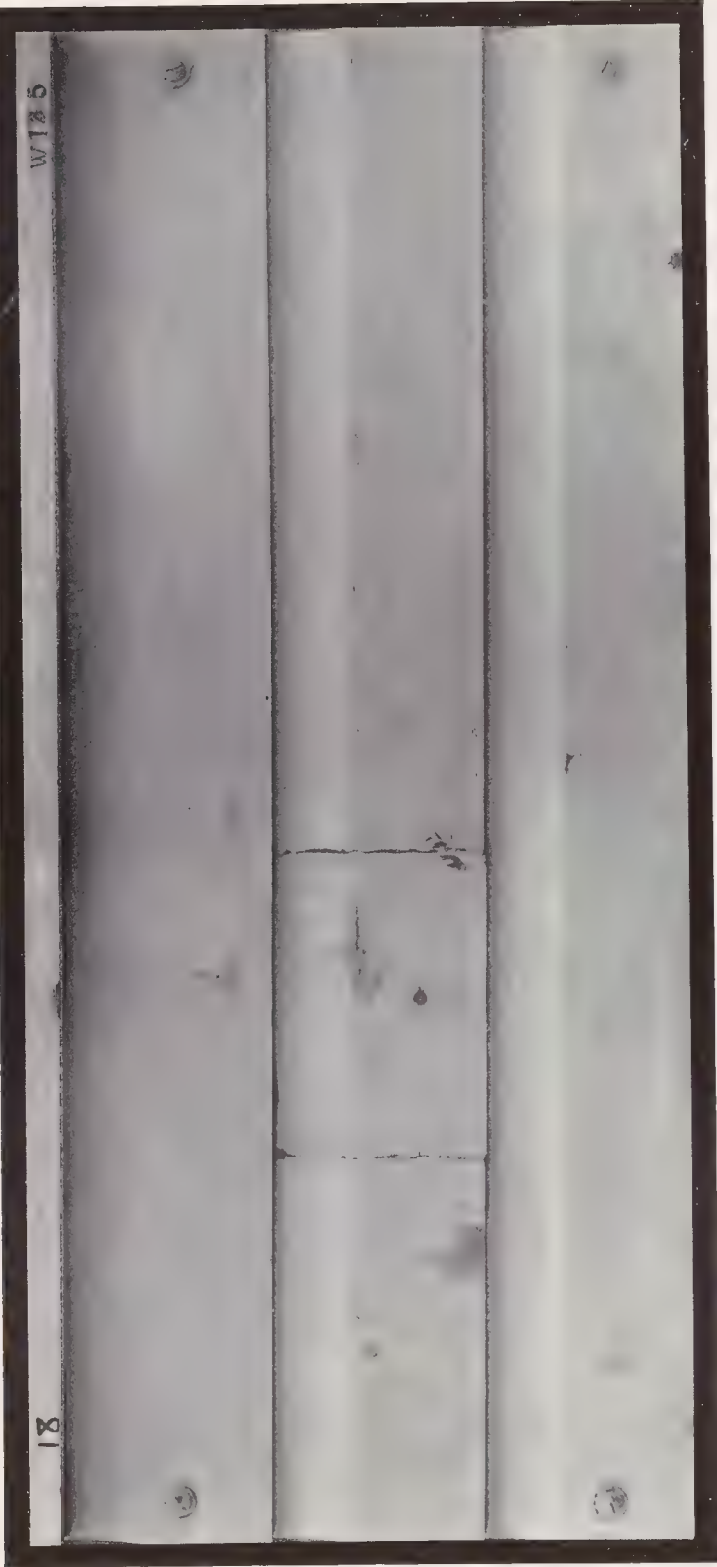
Formula No. 17

Test Panel No. 33

Basic Carbonate-White Lead.....	40%	Results of Inspection.	Aug. 30, 1912:
Zinc Oxide.....	40%	Chalking: Considerable	
Magnesium Silicate.....	8%	Checking: Medium	
Barium Sulphate.....	13%	General Condition: Fairly good	
Blanc Fixe.....	4%		
	<hr/>		
	100%		

18

W185

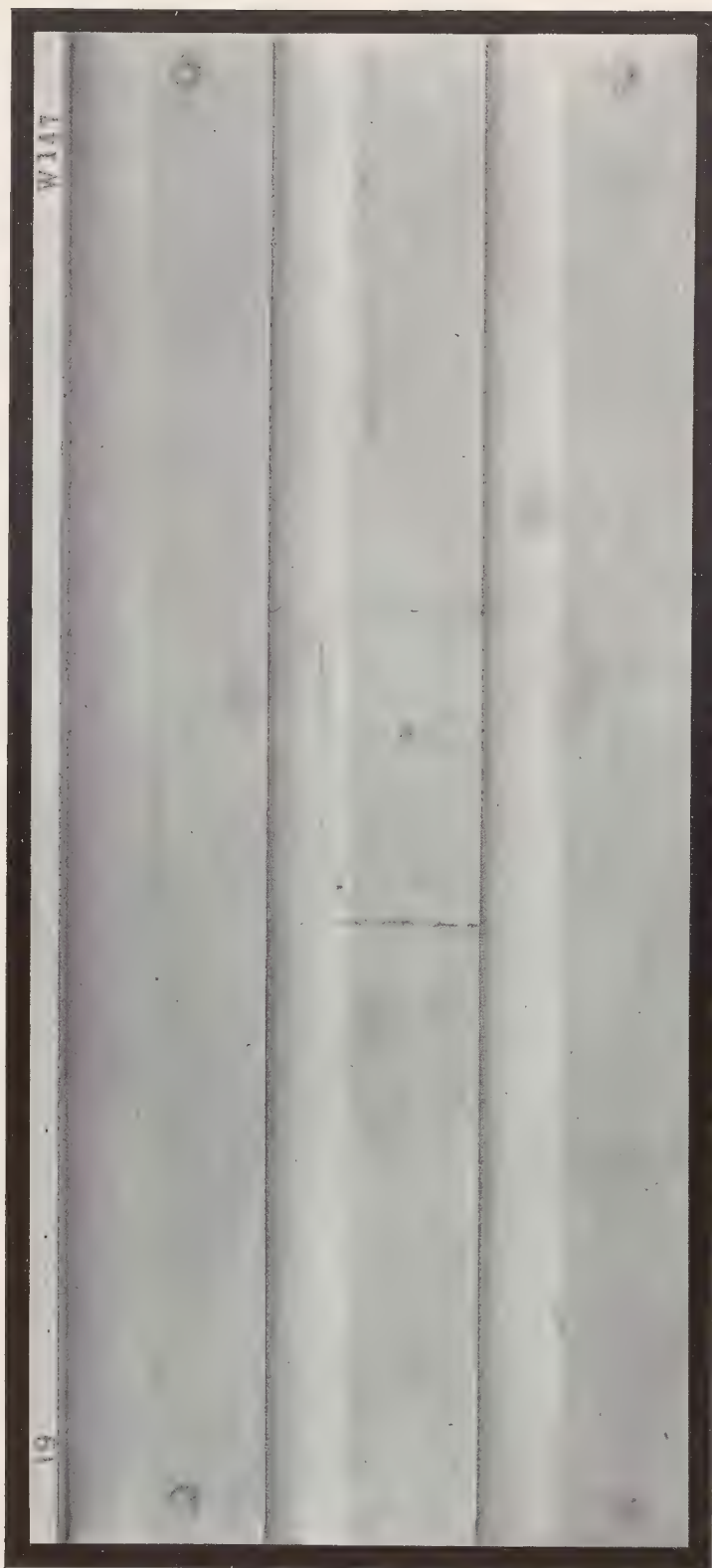


OLD TESTS REPAINTED

Formula No. 18

Test Panel No. 145

Basic Carbonate-White Lead.....	75%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	25%	Chalking : Considerable
	<hr/>	Checking : Slight
	100%	General Condition : Good

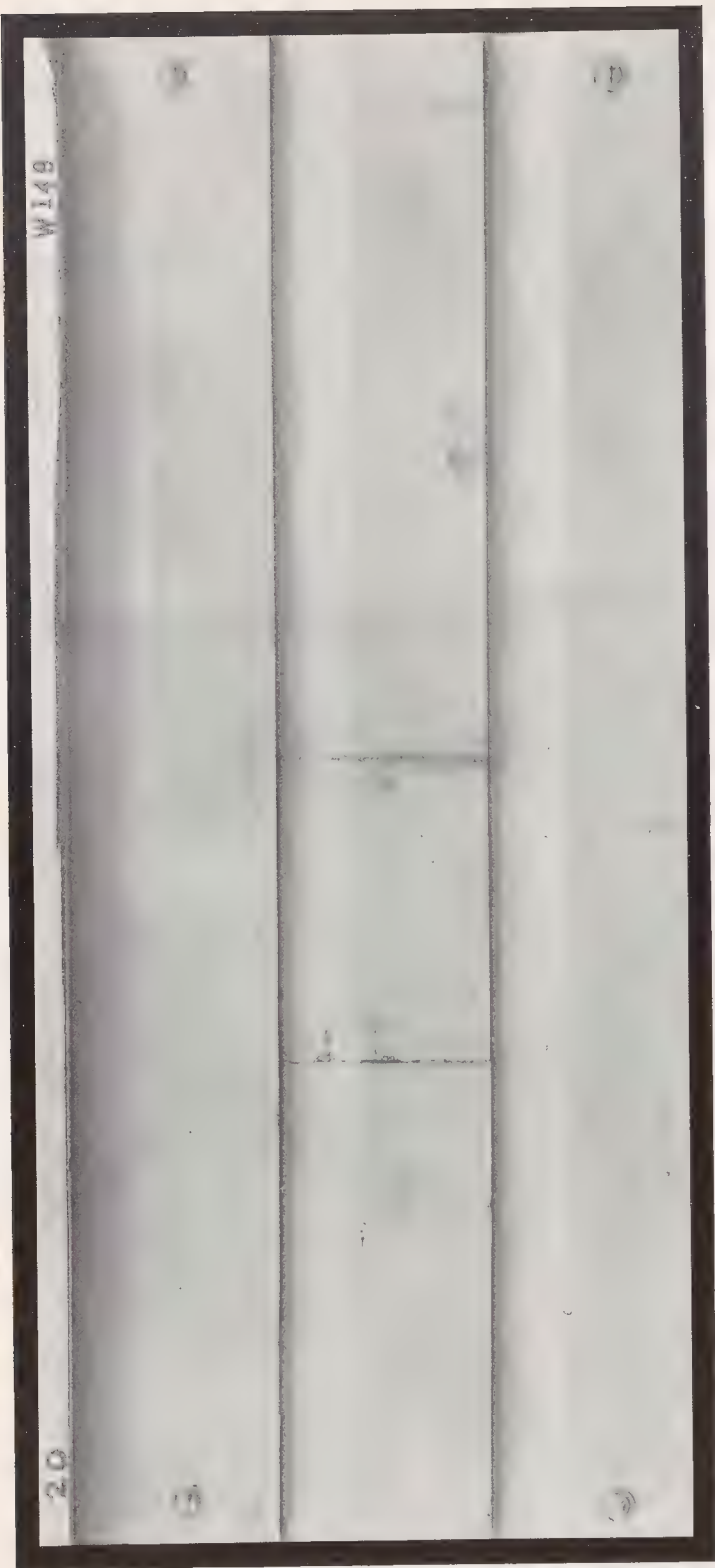


OLD TESTS REPAINTED

Formula No. 19

Test Panel No. 147

Zinc Oxide.....	25%	Results of Inspection. Aug. 30, 1912:
Basic Sulphate-White Lead.....	75%	Chalking: Considerable
	<hr/>	Checking: Very slight
	100%	General Condition: Very good

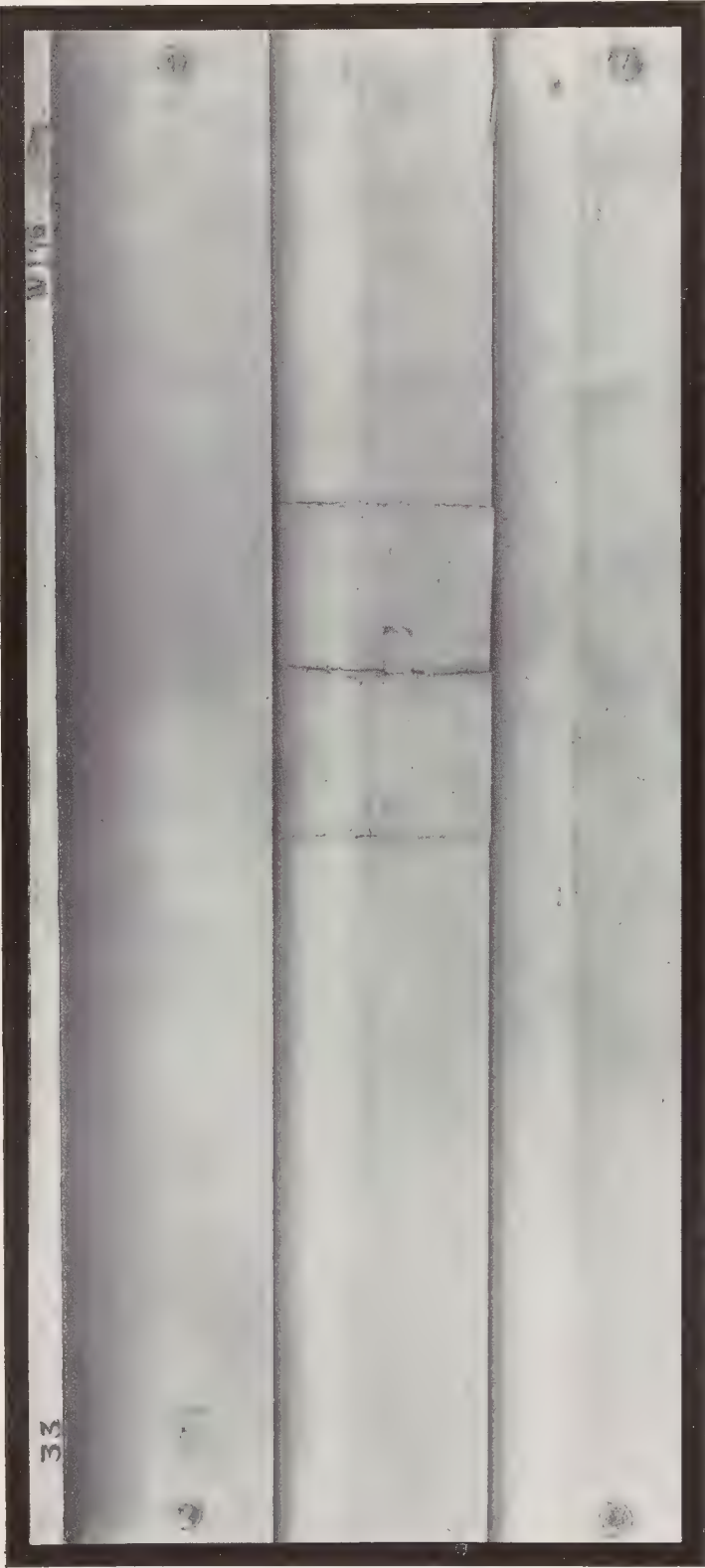


OLD TESTS REPAINTED

Formula No. 20

Test Panel No. 149

Basic Carbonate-White Lead.....	67.00%	Results of Inspection. Aug. 30, 1912:
Zinc Oxide.....	19.50%	Chalking: Considerable
Calcium Carbonate.....	10.00%	Checking: Considerable
Magnesium Silicate.....	3.50%	General Condition: Fair
	<hr/> 100.00%	



OLD TESTS REPAINTED

Formula No. 33

Test Panel No. 176

Basic Carbonate-White Lead.....	15%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	30%	Chalking: Medium
Basic Sulphate-White Lead.....	25%	Checking: Slight
Silica	30%	General Condition: Good
<hr/>		
		100%



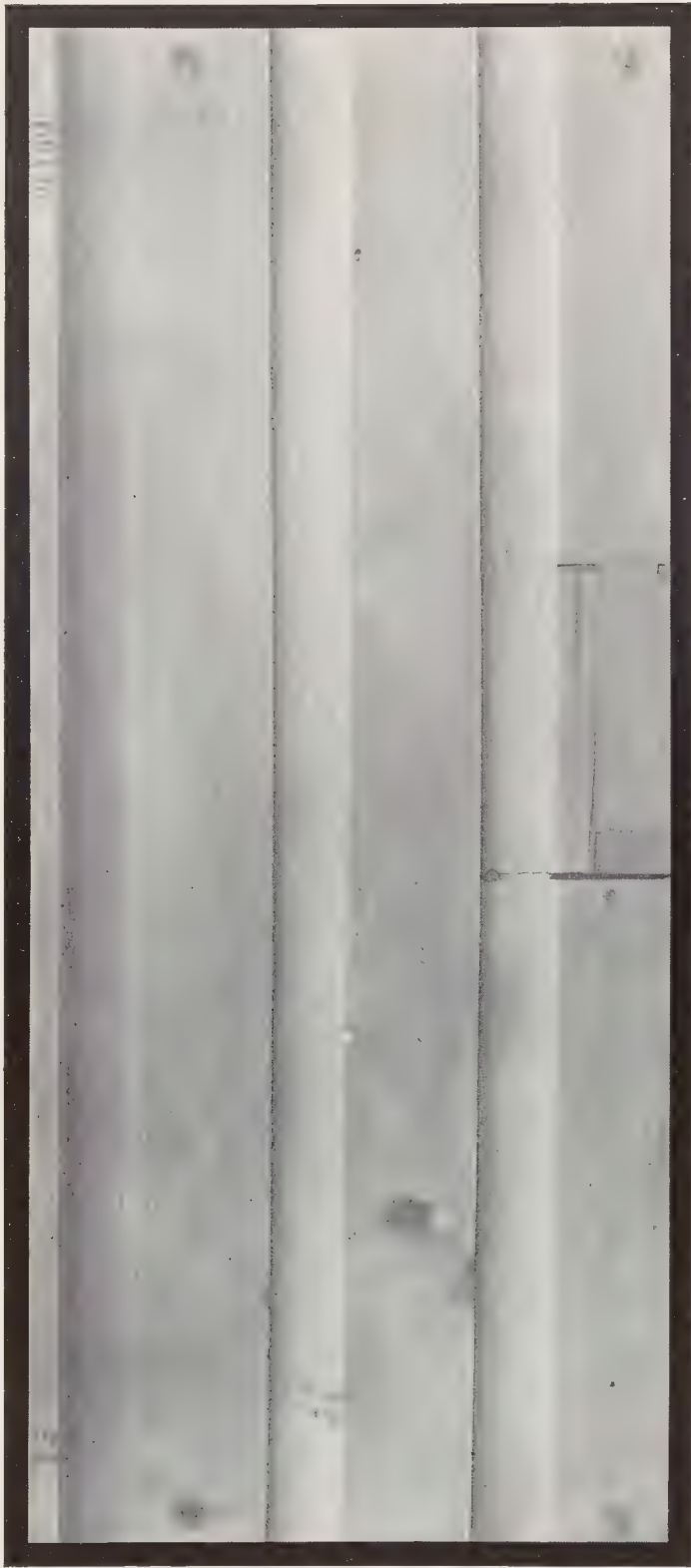
OLD TESTS REPAINTED

Formula No. 34

Test Panel No. 175

Results of Inspection. Aug. 30, 1912:
Chalking: Slight
Checking: Slight
General Condition: Good

Basic Carbonate-White Lead.....	38.95%
Zinc Oxide.....	33.58%
Basic Sulphate-White Lead.....	4.81%
Calcium Carbonate.....	19.48%
Barium Sulphate.....	1.59%
Silica	1.59%
<hr/>	
	100.00%



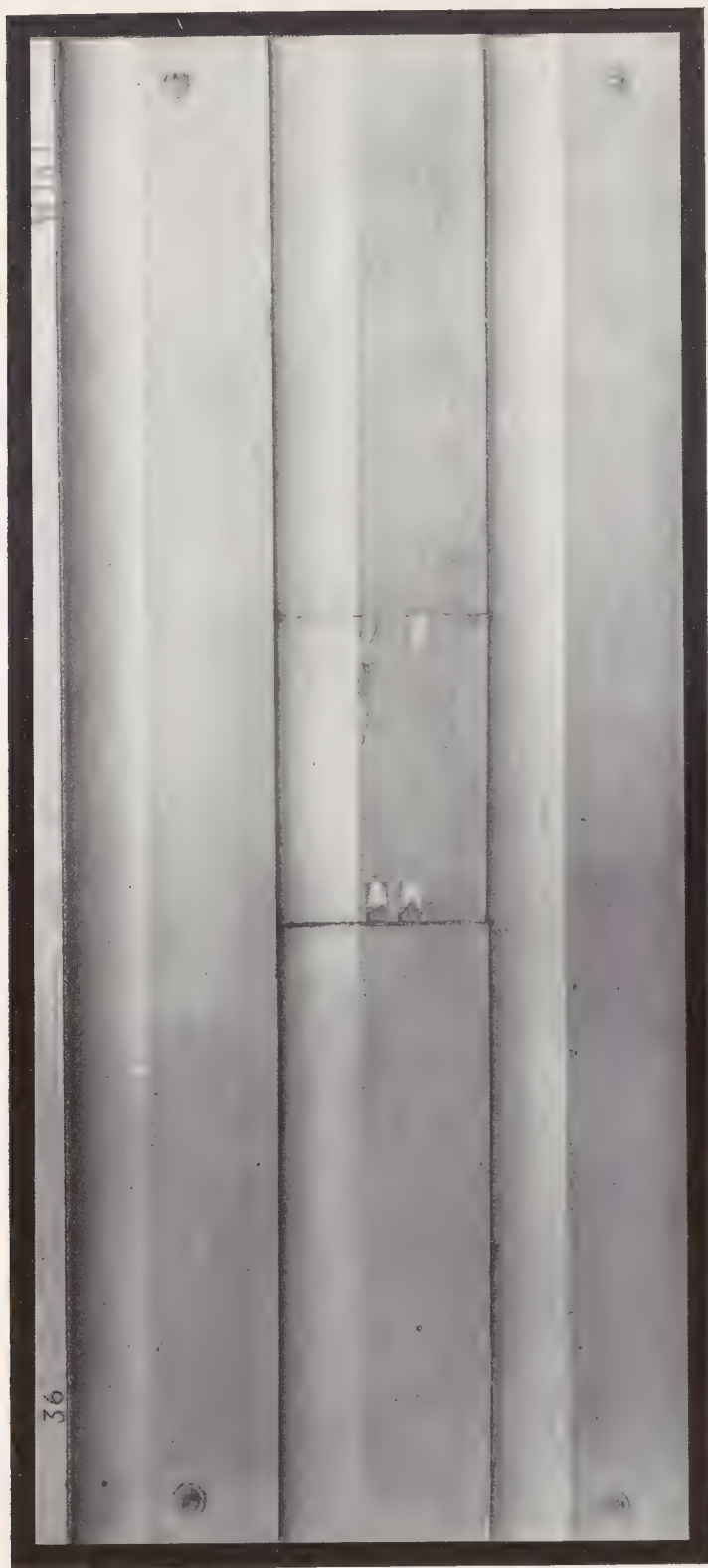
OLD TESTS REPAINTED

Formula No. 35

Test Panel No. 180

Results of Inspection, Aug. 30, 1912:
Chalking: Slight
Checking: Slight
General Condition: Good

Basic Carbonate-White Lead.....	37.51%
Zinc Oxide.....	25.87%
Basic Sulphate-White Lead.....	7.84%
Calcium Carbonate.....	20.36%
Barium Sulphate.....	4.21%
Silica	4.21%
<hr/>	
	100.00%

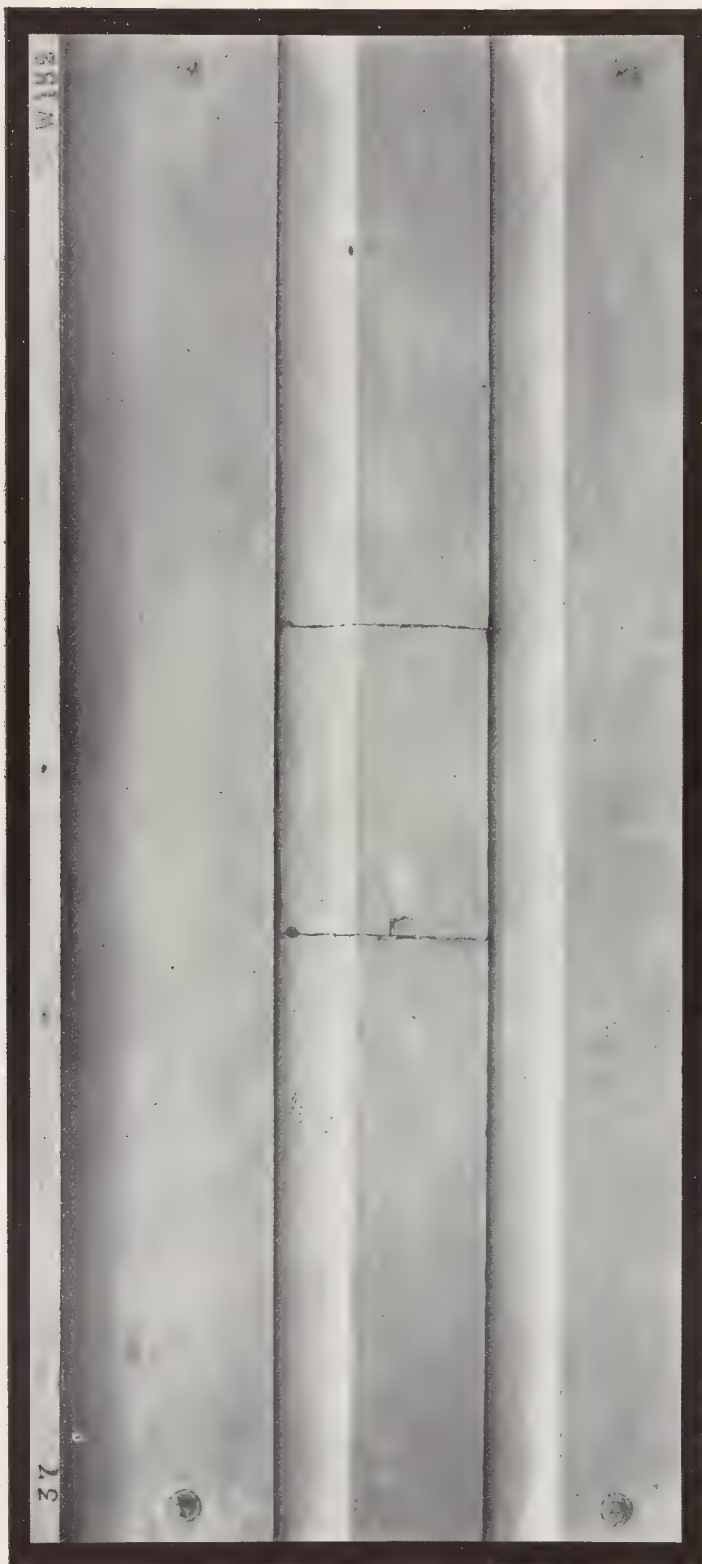


OLD TESTS REPAINTED

Formula No. 36

Test Panel No. 181

Basic Carbonate-White Lead.....	100%	Results of Inspection.	Aug. 30, 1912:
			Chalking: Heavy
			Checking: Deep
			General Condition: Fair



OLD TESTS REPAINTED

Formula No. 37

Test Panel No. 182

Basic Carbonate-White Lead.....	100%	Results of Inspection, Aug. 30, 1912:
		Chalking: Heavy
		Checking: Heavy and deep
		General Condition: Fair

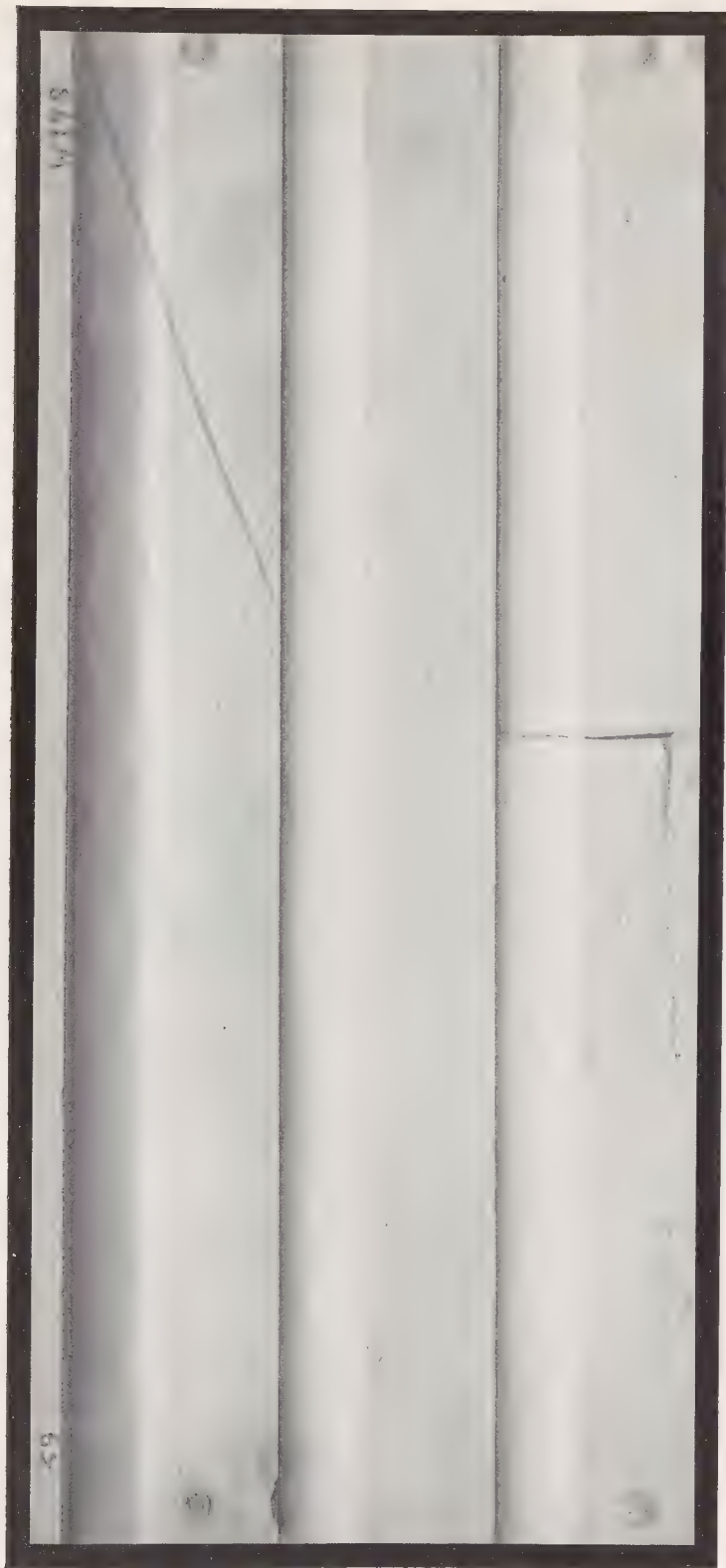


OLD TESTS REPAINTED

Formula No. 38

Test Panel No. 177

Basic Carbonate-White Lead..... 100% Results of Inspection, Aug. 30, 1912:
Chalking: Heavy
Checking: Deep
General Condition: Fair

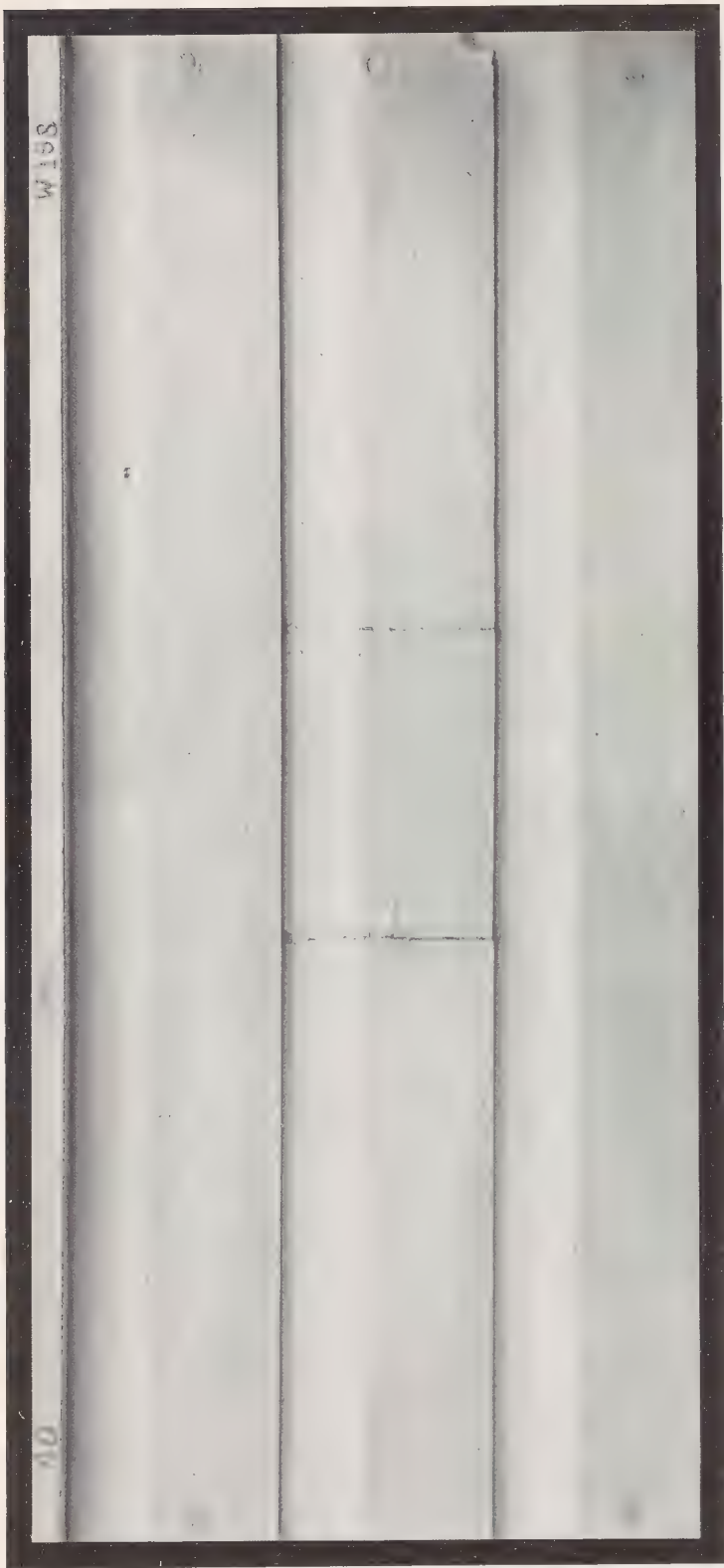


OLD TESTS REPAINTED

Formula No. 39

Test Panel No. 178

Zinc Lead..... 100% Results of Inspection, Aug. 30, 1912:
 Chalking : Considerable
 Checking : Very slight
 General Condition : Good

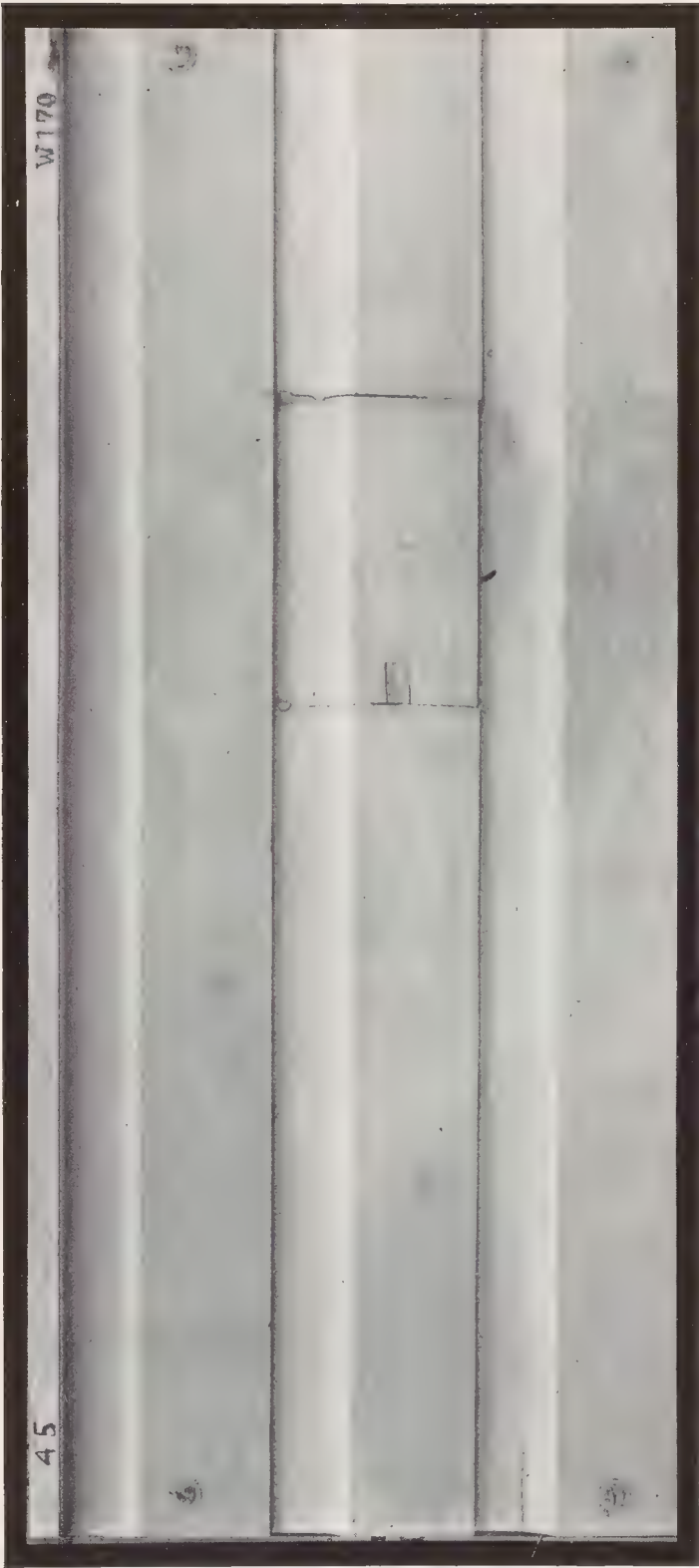


OLD TESTS REPAINTED

Formula No. 40

Test Panel No. 168

Basic Sulphate-White Lead..... 100% Results of Inspection, Aug. 30, 1912:
Chalking: Heavy
Checking: None
General Condition: Fairly good

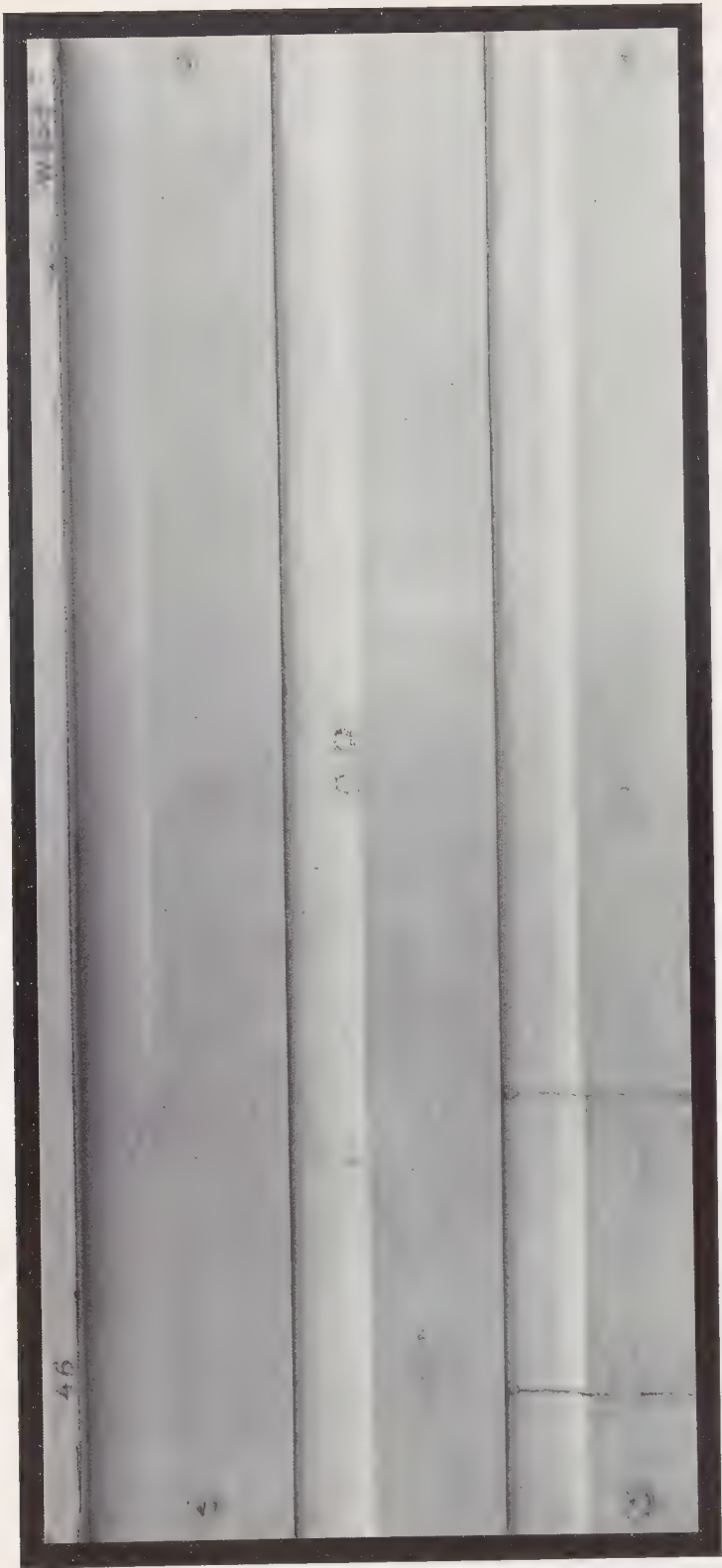


OLD TESTS REPAINTED

Formula No. 45

Test Panel No. 170

Zinc Oxide.....	90%	Results of Inspection, Aug. 30, 1912:
Calcium Carbonate.....	10%	Chalking: Medium
	<hr/>	Checking: Slight
	100%	General Condition: Good

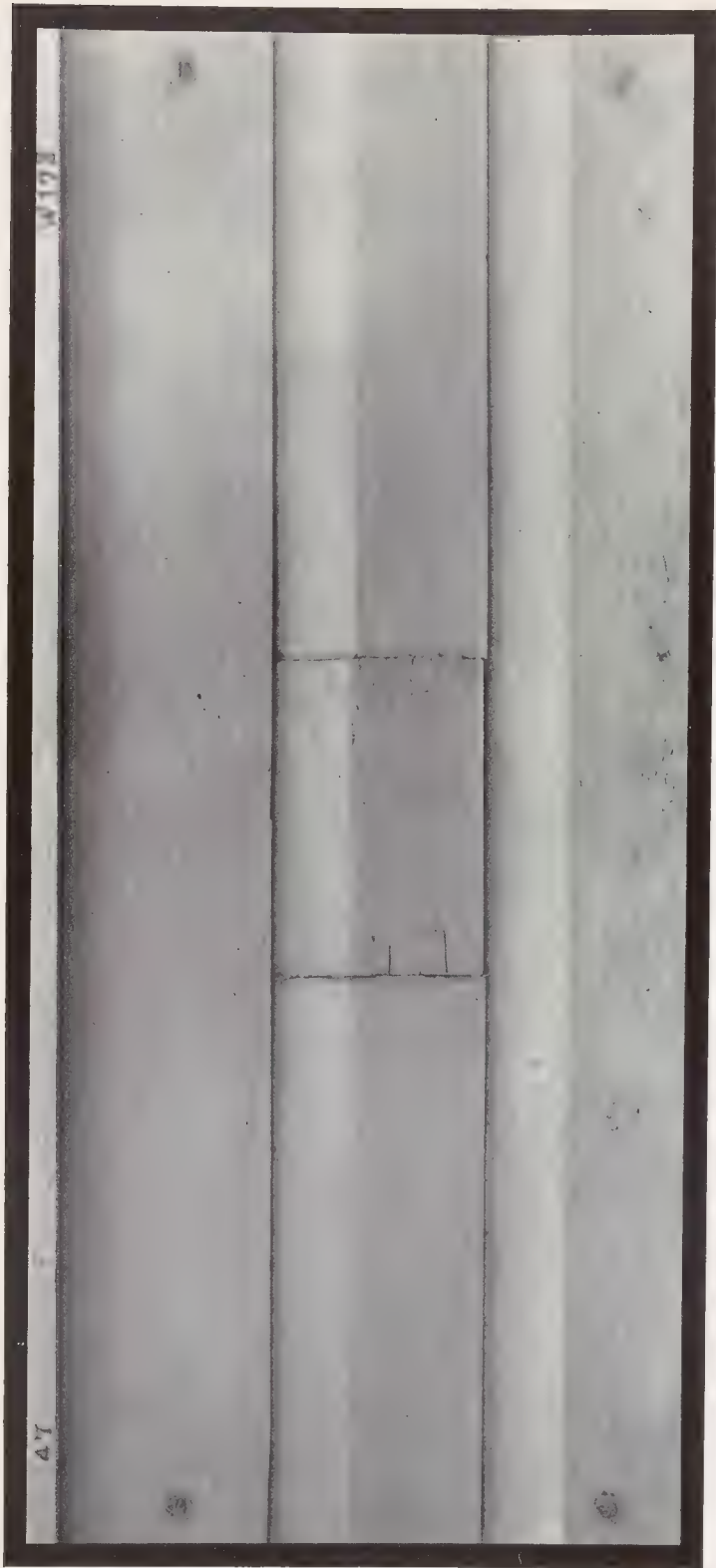


OLD TESTS REPAINTED

Formula No. 46

Test Panel No. 169

Zinc Oxide.....	61%	Results of Inspection, Aug. 30, 1912:
Barium Sulphate.....	39%	Chalking: Slight
	100%	Checking: Slight
		General Condition: Good



OLD TESTS REPAINTED

Formula No. 47

Test Panel No. 172

Zinc Oxide.....	100%	Results of Inspection.	Aug. 30, 1912:
		Chalking:	None
		Checking:	Surface cracking
		General Condition:	Fair



NEW TESTS

Formula No. 1

Test Panel No. 1

Basic Sulphate-White Lead.....	45%	Results of Inspection. Aug. 30, 1912:
Lithopone	40%	Chalking:
Calcium Carbonate.....	15%	Checking:
	<hr/>	General Condition: Disintegrated
	100%	



NEW TESTS

Formula No. 2

Test Panel No. 2

Basic Sulphate-White Lead.....	45%	Results of Inspection, Aug. 30, 1912:
Lithopone	40%	Chalking:
Silica	15%	Checking:
	100%	General Condition: Disintegrated

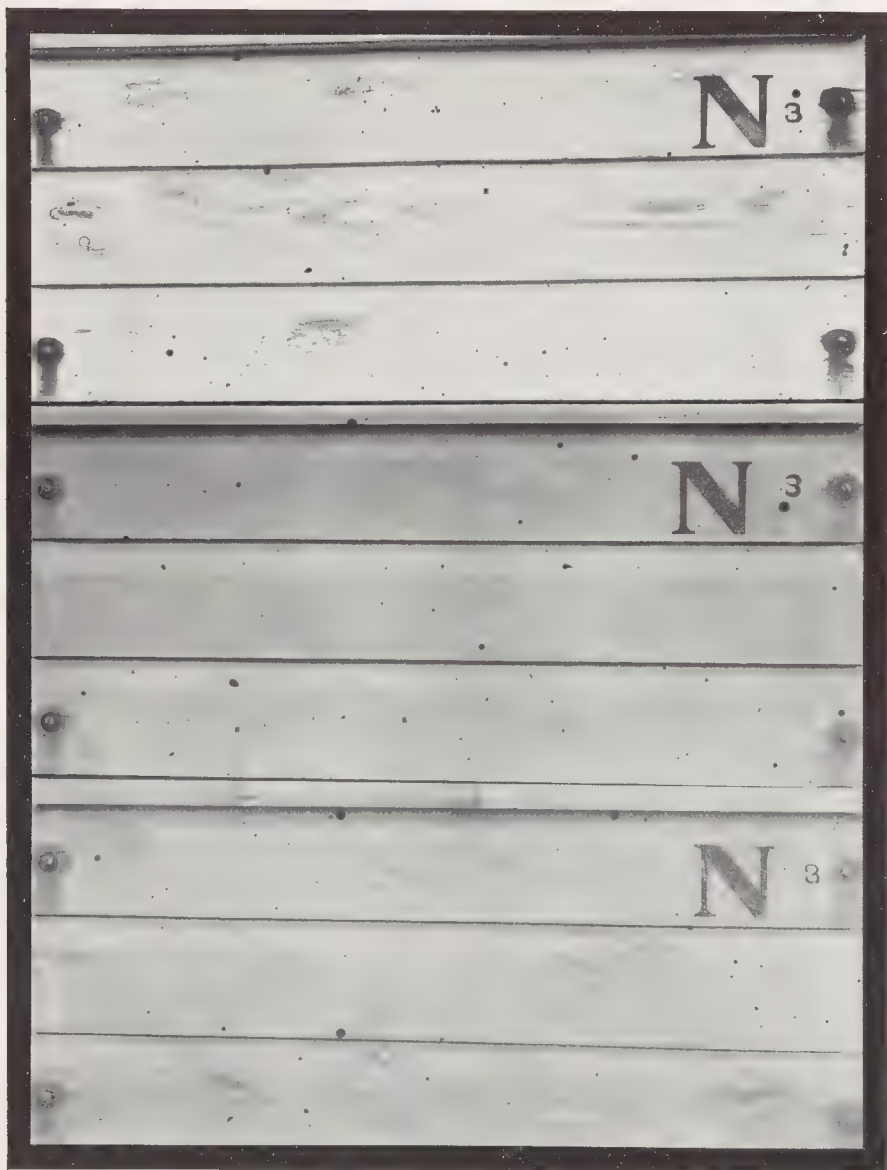


NEW TESTS

Formula No. 3

Test Panel No. 3

Zinc Oxide.....	45%	Results of Inspection, Aug. 30, 1912:
Lithopone	45%	Chalking: Considerable
Calcium Carbonate.....	10%	Checking: Disintegrated
	<hr/> 100%	General Condition: Poor



VIEW OF FORMULA NO. 3.

In White, Yellow and Gray.

Although this formula failed in white, the same formula tinted yellow and gray is in very fair condition.



NEW TESTS

Formula No. 4

Test Panel No. 4

Basic Sulphate-White Lead.....	45%	Results of Inspection, Aug. 30, 1912:
Lithopone	45%	Chalking:
Calcium Carbonate.....	10%	Checking:
	<hr/>	General Condition: Disintegrated
	100%	

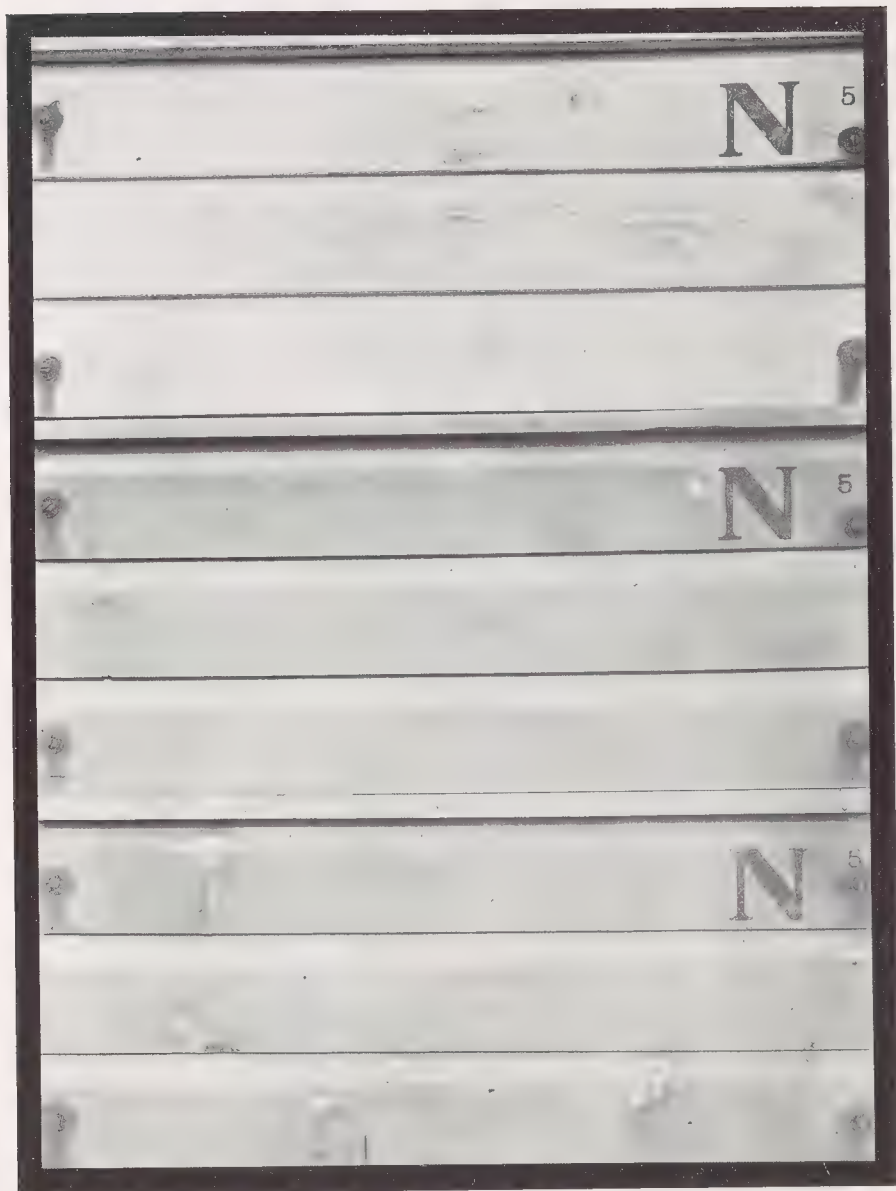


NEW TESTS

Formula No. 5

Test Panel No. 5

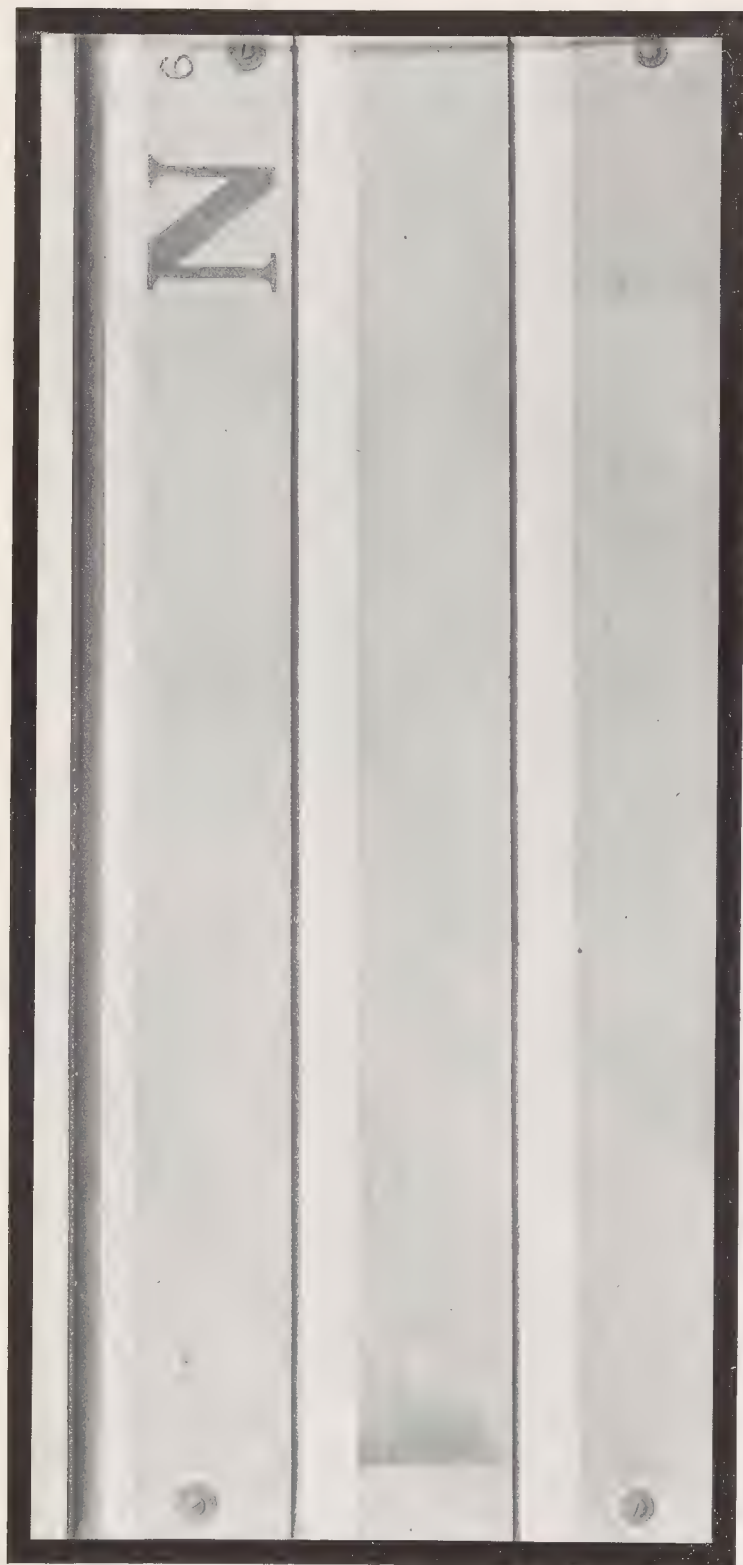
Zinc Oxide.....	40%	Results of Inspection, Aug. 30, 1912:
Lithopone	40%	Chalking: Considerable
Calcium Carbonate.....	20%	Checking: Disintegrated
	<hr/> 100%	General Condition: Poor



VIEW OF FORMULA No. 5.

In White, Yellow and Gray.

Although this formula failed in white, the same formula tinted yellow and gray is in very fair condition.



NEW TESTS

Formula No. 6

Test Panel No. 6

Basic Sulphate-White Lead.....	45%
Lithopone	35%
Asbestine	20%
	<hr/>
	100%

Results of Inspection. Aug. 30, 1912:

Chalking:

Checking:

General Condition: Disintegrated

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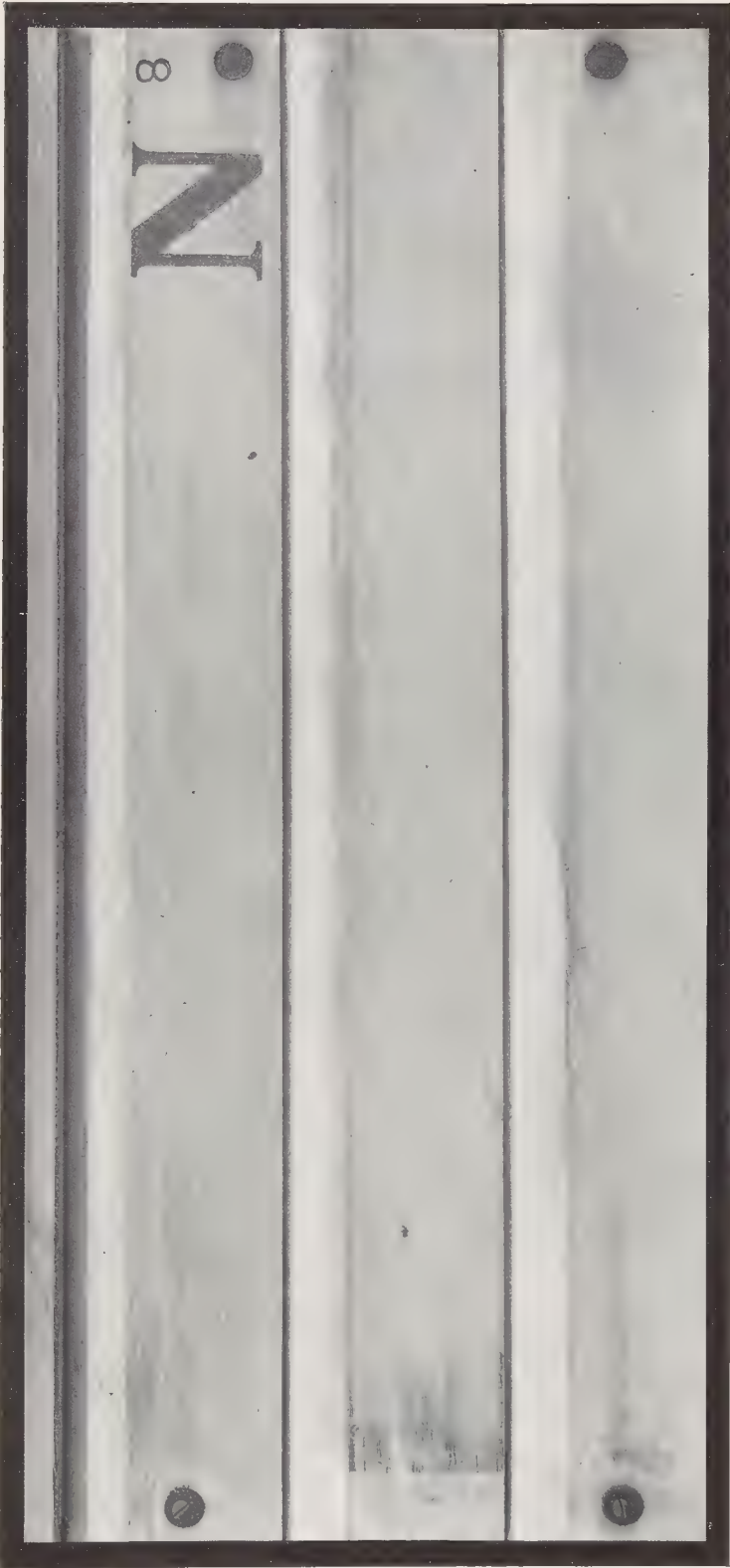
NEW TESTS

Formula No. 7

Test Panel No. 7

Basic Carbonate-White	Lead	50%	Results of Inspection, Aug. 30, 1912:
Zinc	Lead	36%	Chalking: Considerable
Asbestosine		2%	Checking: Very slight
China Clay		8%	General Condition: Good
Barytes		4%	

100%



NEW TESTS

Formula No. 8

Test Panel No. 8

	Results of Inspection, Aug. 30, 1912:
Basic Sulphate-White Lead.....	50%
Lithopone	36%
Asbestine	2%
China Clay.....	8%
Barytes	4%
	<hr/> 100%
	Chalking:
	Checking:
	General Condition: Disintegrated



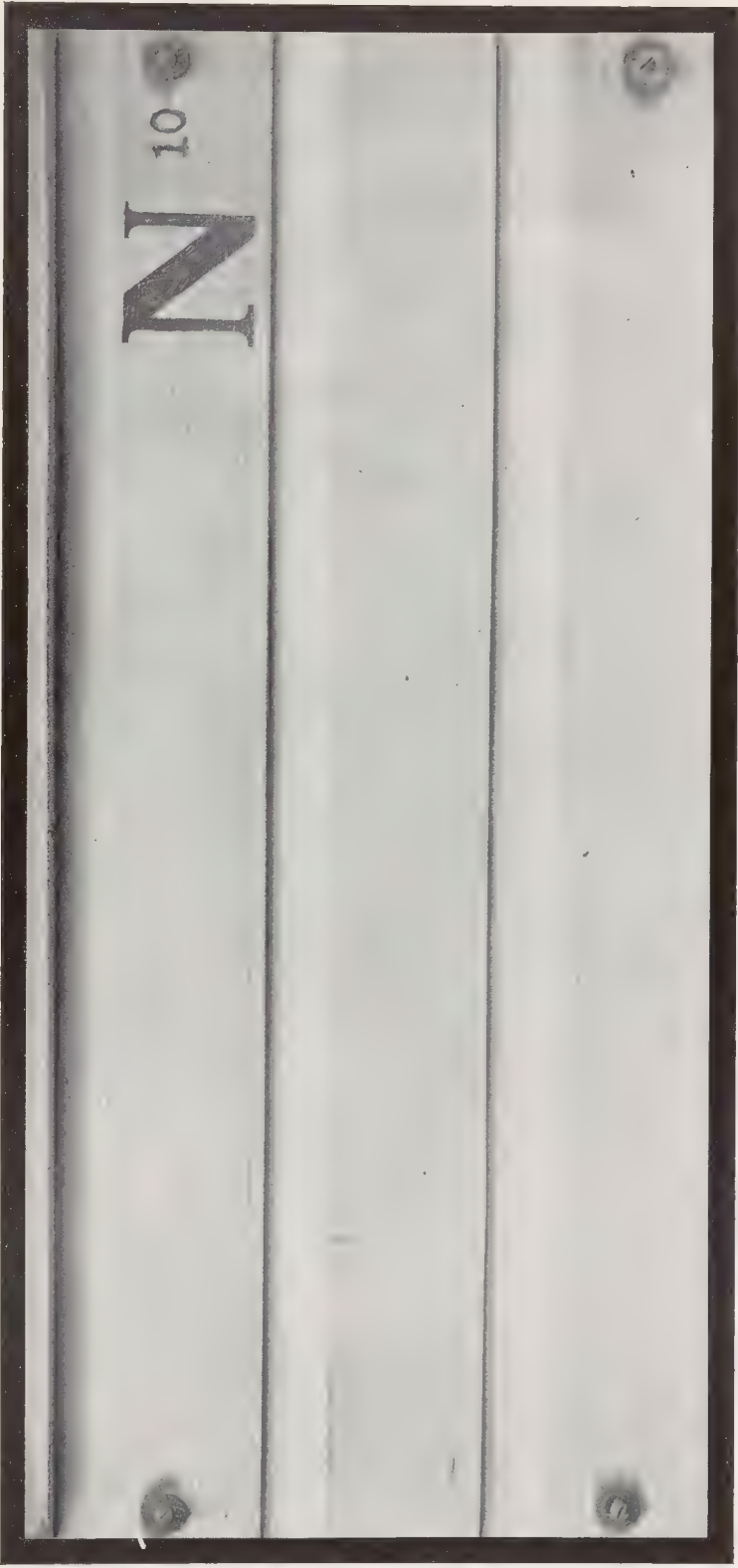
NEW TESTS

Formula No. 9

Test Panel No. 9

Basic Sulphate-White Lead.....	50%
Lithopone	36%
Asbestine	2%
Barytes	12%
	<hr/>
	100%

Results of Inspection, Aug. 30, 1912:
Chalking:
Checking:
General Condition: Disintegrated



New Tests

Formula No. 10

Test Panel No. 10

Zinc Oxide.....	36%	Results of Inspection, Aug. 30, 1912:
Basic Sulphate-White Lead.....	50%	Chalking: Slight
Asbestine	2%	Checking: Slight
China Clay.....	8%	General Condition: Poor
Barytes	4%	
<hr/>		
100%		

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NEW TESTS

Formula No. 11

Test Panel No. 11

Basic Carbonate-White Lead.....	28%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	55%	Chalking: Slight
Asbestine	3%	Checking: Considerable
Barytes	7%	General Condition: Fair to poor
Blanc Fixe.....	7%	
	<hr/>	
	100%	



NEW TESTS

Formula No. 12

Test Panel No. 12

Zinc Oxide.....	55%
Basic Sulphate-White Lead.....	28%
Asbestine	3%
Barytes	7%
Blanc Fixe.....	7%
	%

Results of Inspection, Aug. 30, 1912:
Chalking: Considerable
Checking: Slight
General Condition: Good

13

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NEW TESTS

Formula No. 13

Test Panel No. 13

Zinc Oxide.....	60%	Results of Inspection, Aug. 30, 1912:
Lithopone	30%	Chalking: Medium
Calcium Carbonate.....	10%	Checking: Considerable
	<hr/> 100%	General Condition: Fair to poor



NEW TESTS

Formula No. 14

Test Panel No. 14

Zinc Oxide.....	30%	Results of Inspection, Aug. 30, 1912:
Basic Sulphate-White Lead.....	30%	
Lithopone	30%	
Calcium Carbonate.....	10%	
		%

Chalking: Heavy
 Checking: Considerable
 General Condition: Fair to poor

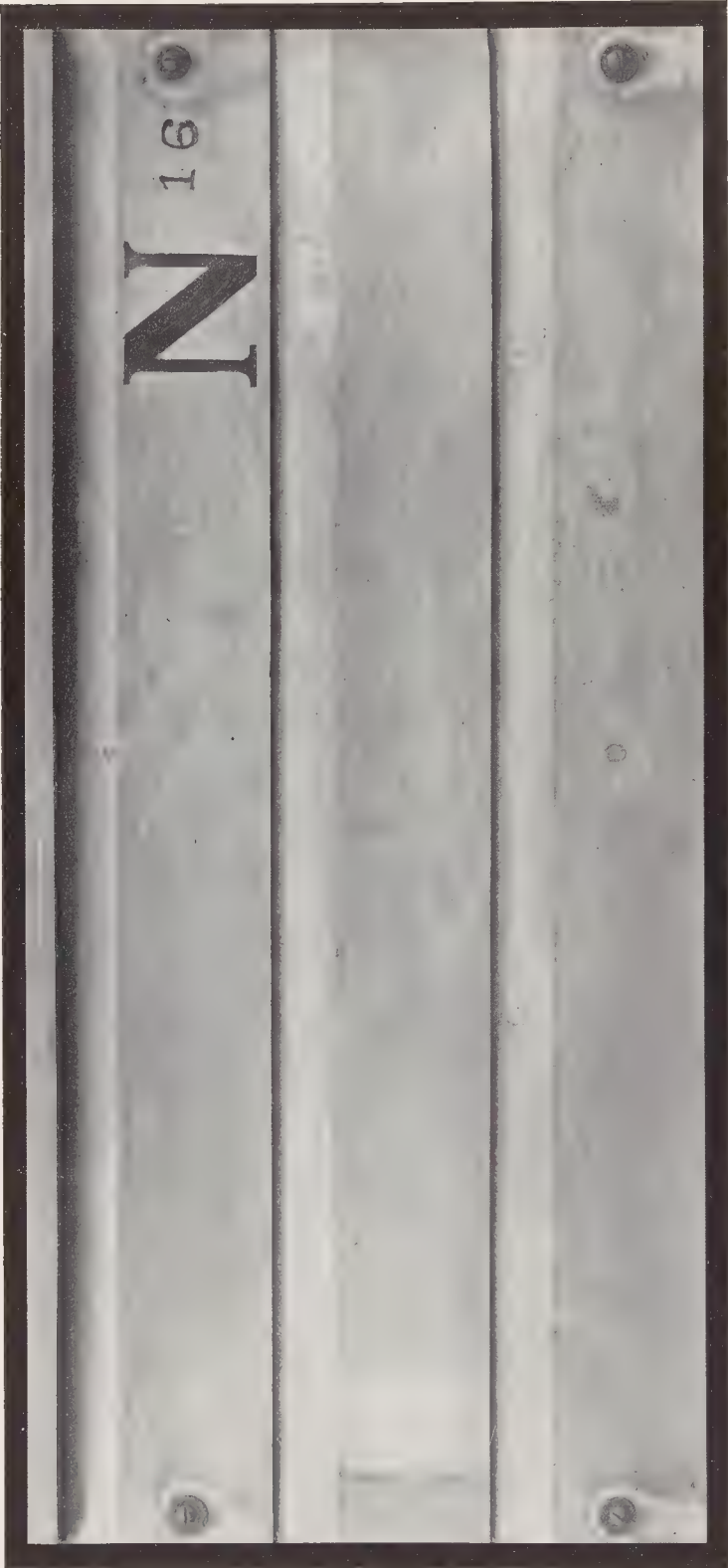
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NEW TESTS

Formula No. 15

Test Panel No. 15

Basic Sulphate-White Lead.....	60%	Results of Inspection, Aug. 30, 1912:
Lithopone	30%	Chalking: Heavy
Asbestine	10%	Checking: Heavy
	<hr/> 100%	General Condition: Fair



NEW TESTS

Formula No. 16

Test Panel No. 16

Lithopone 100% Results of Inspection, Aug. 30, 1912:
Chalking:
Checking:
General Condition: Disintegrated



NEW TESTS

Formula No. 17

Test Panel No. 17

Lithopone	100%	Results of Inspection, Aug. 30, 1912:
		Chalking:
		Checking:
		General Condition: Disintegrated



NEW TESTS

Formula No. 18

Test Panel No. 18

Basic Carbonate-White Lead.....	33%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	33%	Chalking: Slight
Silica	17%	Checking: Slight
China Clay.....	17%	General Condition: Fair



NEW TESTS

Formula No. 19

Test Panel No. 19

Basic Carbonate-White Lead.....	34%	Results of Inspection, Aug. 30, 1912:
Zinc Oxide.....	53%	Chalking: Slight
Silica	83%	Checking: Disintegrated
	<hr/> 100%	General Condition: Poor



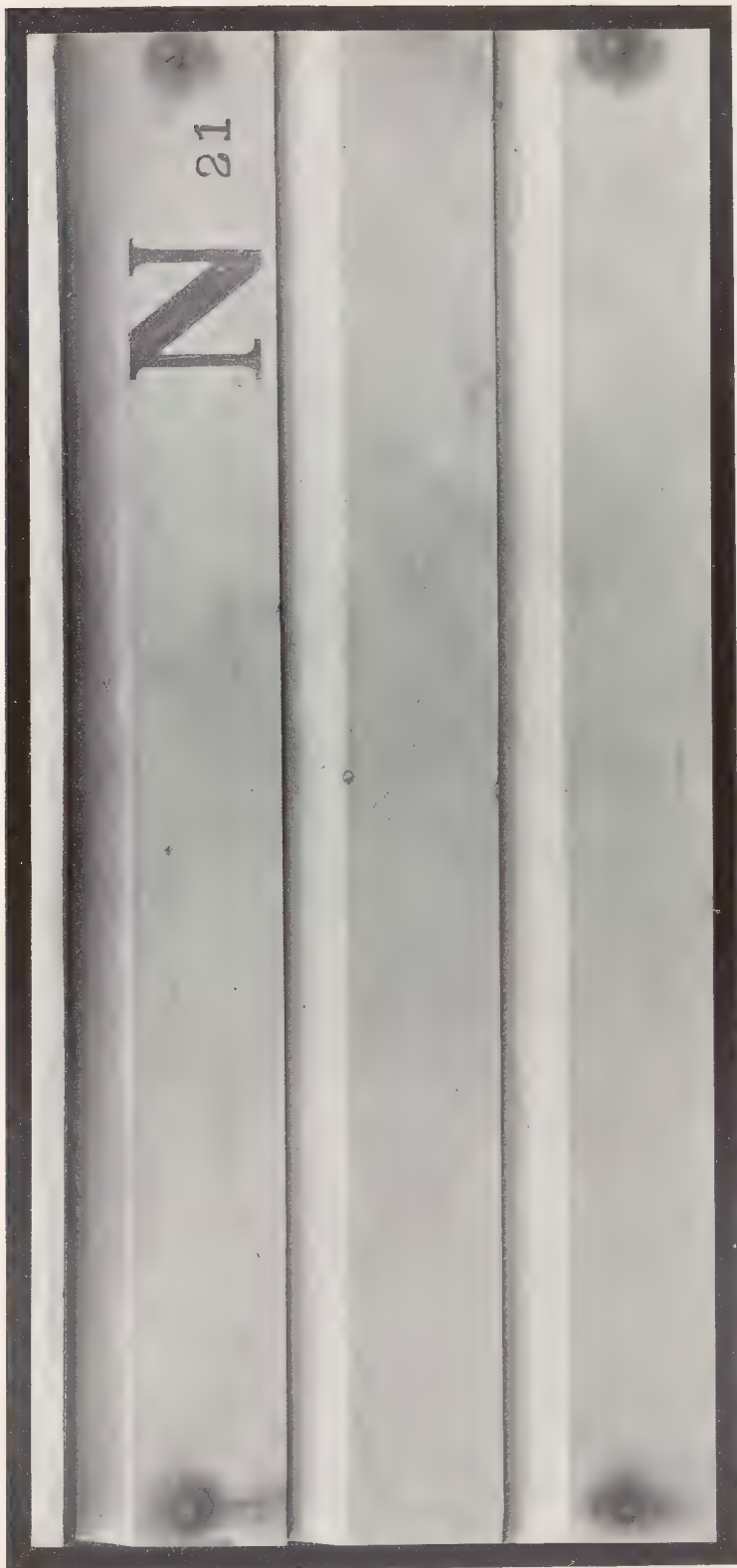
NEW TESTS

Formula No. 20

Test Panel No. 20

Basic Carbonate-White Lead.....	34%
Zinc Oxide.....	33%
China Clay.....	33%
	<hr/>
	100%

Results of Inspection: Aug. 30, 1912;
Chalking: Slight
Checking: Slight
General Condition: Fair to poor

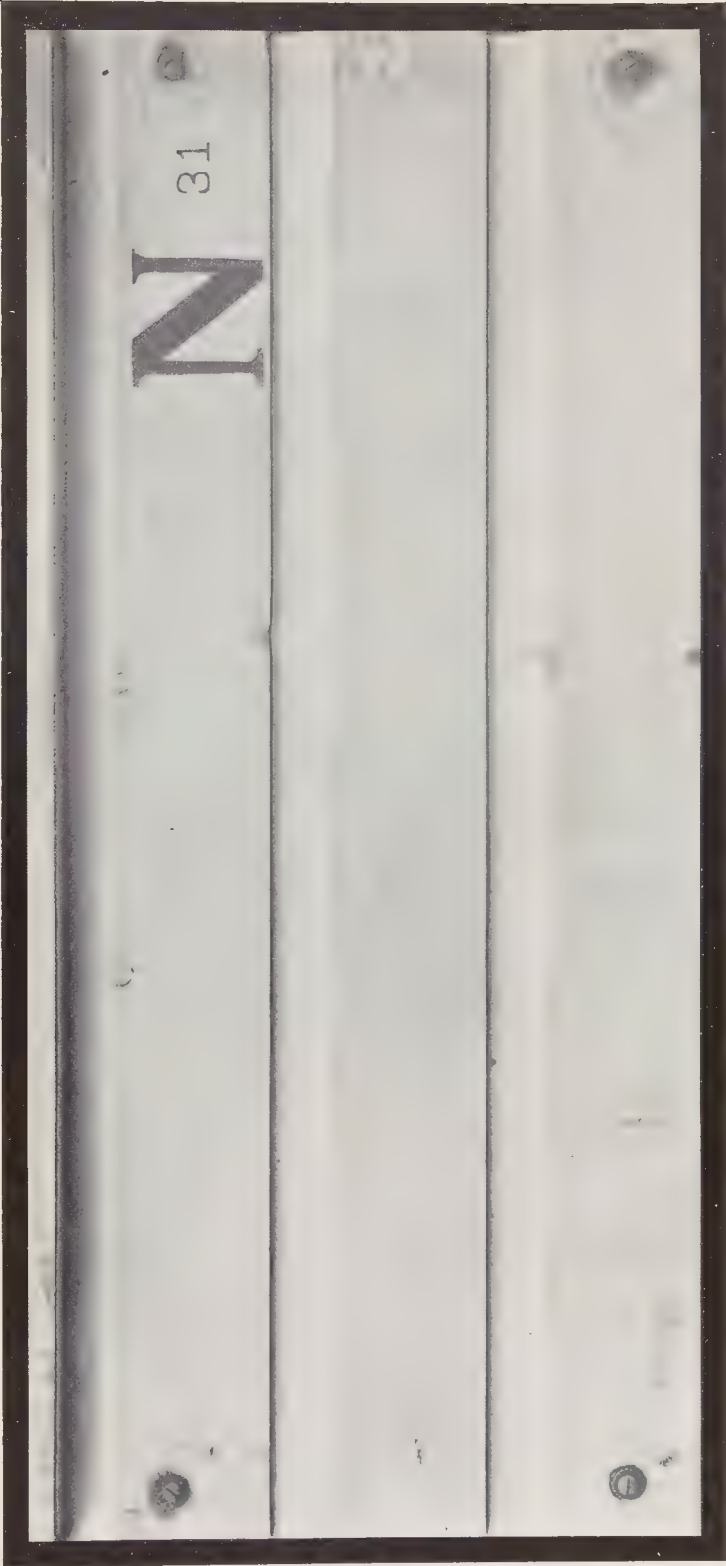


NEW TESTS

Formula No. 21

Test Panel No. 21

Basic Carbonate-White Lead..... 100% Results of Inspection, Aug. 30, 1912:
Chalking: Heavy
Checking: Slight
General Condition: Fairly good



NEW TESTS

Formula No. 31

Test Panel No. 31

Basic Carbonate-White Lead.....	45%
Lithopone	40%
Silica	15%
<hr/>	
	100%

Results of Inspection, Aug. 30, 1912:
Chalking: Heavy
Checking: Heavy alligatoring
General Condition: Very poor



NEW TESTS

Formula No. 32

Test Panel No. 32

Basic Carbonate-White Lead.....	45%	Results of Inspection, Aug. 30, 1912:
Lithopone	35%	Chalking: Heavy
Asbestine	20%	Checking: Heavy
	<hr/>	General Condition: Poor
	100%	



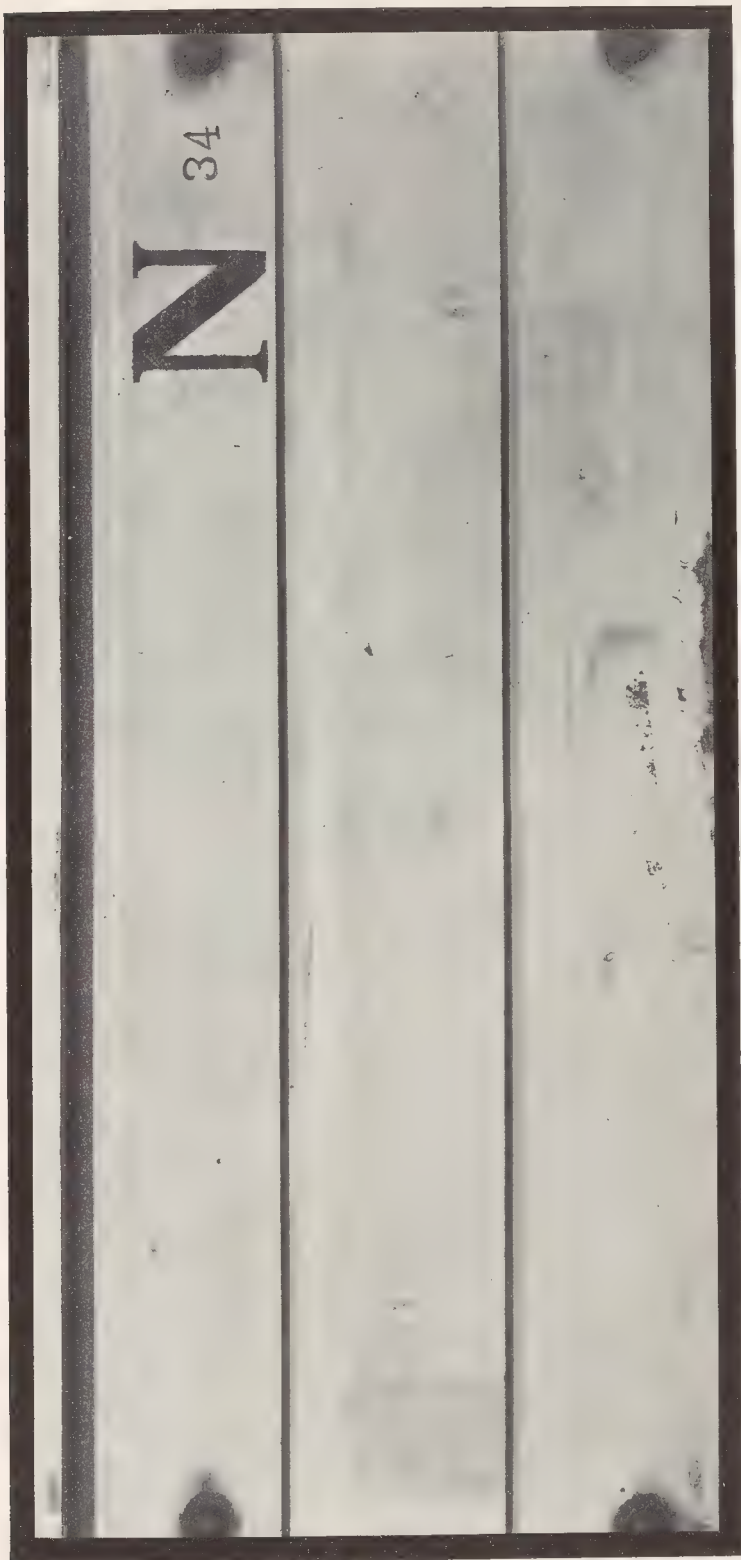
N
33

NEW TESTS

Formula No. 33

Test Panel No. 33

Basic Carbonate-White Lead.....	50%	Results of Inspection. Aug. 30, 1912:
Lithopone	36%	Chalking: Considerable
Asbestine	2%	Checking: Slight
Barytes	12%	General Condition: Poor
	<hr/> 100%	



NEW TESTS

Formula No. 34

Test Panel No. 34

Basic Carbonate-White Lead.....	75%	Results of Inspection, Aug. 30, 1912:
Basic Sulphate-White Lead.....	25%	Chalking: Heavy
	<hr/>	Checking: Considerable
	100%	General Condition: Fair

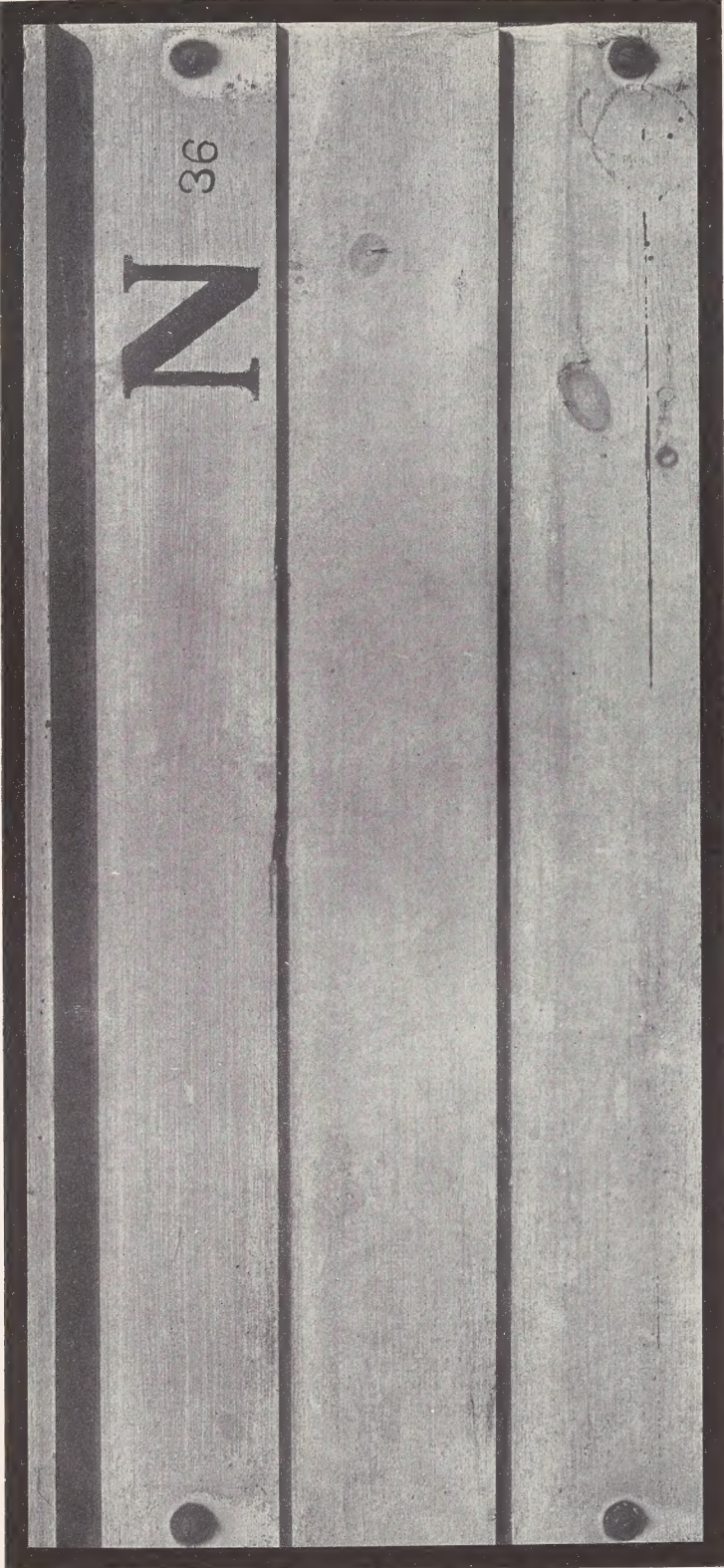


NEW TESTS

Formula No. 35

Test Panel No. 35

Basic Carbonate-White Lead.....	50%	Results of Inspection, Aug. 30, 1912:
Basic Sulphate-White Lead.....	50%	Chalking: Considerable
	<hr/>	Checking: Slight
	100%	General Condition: Fair



NEW TESTS

Formula No. 36

Test Panel No. 36

Silica 100% Results of Inspection, Aug. 30, 1912:
Chalking:
Checking:
General Condition: Disintegrated

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